The Bristol
Medico-Chirurgical Journal.

MARCH, 1899.

THE SURGICAL TREATMENT OF MYOMA OF THE UTERUS.

BY

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UTERINE myomata are of such common occurrence, and they so frequently give rise to serious symptoms, that every practitioner ought to be well acquainted with the chief features of the disease, and with the appropriate therapeutic indications. Modern principles of treatment differ so widely from those hitherto prevalent, that I deem no apology necessary for formulating my views on the subject.

I am not one of those who believe that the mere presence of these tumours is *ipso facto* an indication for operation; for in most cases myomata cause no dangerous symptoms, and in many others such symptoms as do occur may be relieved by palliative treatment. Uterine myomata are less dangerous to life than ovarian cystomata, and their removal is more hazardous; hence radical treatment is only exceptionally required. To justify removal there must be some urgent indication. Probably not more than one-fifth of all cases ever need active surgical intervention, but in about half of these—the patient's life being directly endangered—surgical treatment is urgently called for.

Severe and oft-repeated hemorrhage, undermining the

patient's health, is an indication for operative interference, when other treatment has failed. Pressure-symptoms, indicative of dangerous complications (intestinal obstruction, peritonitis, urinary complications, etc.), whether associated with incarceration or not, may also require it. Myomata that have become inflamed, through septic infection, torsion of pedicle or otherwise, must be promptly removed. Tumours complicated with pregnancy may require surgical intervention, when they cause dystocia, and under some other circumstances. It is generally desirable to remove tumours that project into the vagina, and all very large tumours incompatible with comfortable existence. In persons near the climacteric, it is no use putting off operation, in the expectation that the tumour will subside when the catamenia cease; for this is an event that rarely happens, as is evident by noting the large proportion of patients of post-climacteric ages in any statistical list of operations.[1]

In operating for non-malignant uterine tumours, it is well to bear in mind the old surgical maxim, "*Non nocere.*" Healthy organs should not be sacrificed unnecessarily; and it is of great importance to preserve the ovaries, wholly or in part. Two contingencies must be specially provided against; viz., *sepsis* and *hemorrhage*. Strict aseptic precautions are a *sine quâ non;* for it is only by this means that successful results can be attained. For the arrest of hemorrhage, it is necessary to have accurate knowledge of the course and relations of the ovarian and uterine blood-vessels, and of the seats of election for their ligation, compression, etc.

Removal per vaginam.—The removal of myomata that have descended into the vagina is an ancient procedure. It was practically the only form of surgical treatment in vogue, until Amussat,[2] in 1840, opened up the cervix and removed a myoma from within the corpus uteri.

It must be borne in mind that septic infection of myomata

[1] Of 250 operated cases tabulated by Péan, 100 were between fifty and sixty years of age, and 70 between forty and fifty. (*Semaine méd.*, Avril 5, 1893.)

[2] *Mém. sur l'anat. path. des tumeurs fibreuses de l'utérus et sur la possibilité d'extirper ces tumeurs, etc.*, 1842.

projecting into the uterus and vagina is a most dangerous complication, which is apt to be caused by any form of traumatism. Consequently vaginal removal should only be attempted when complete extirpation of the tumour seems feasible. It is a mistake to attempt to imitate the natural process of expulsion by partial operation, by incision into the capsule, by decortication, by gouging or burning the tumour-substance, etc., for in nineteen out of twenty cases the natural efforts at elimination end fatally, and the results of the artificial imitation thereof are hardly less disastrous. For similar reasons, ligation and torsion of the pedicle are also to be condemned, as well as the use of the *écraseur*, the galvano-cautery snare, and the curette, for all these proceedings favour inflammation and septic infection, of which many fatal instances might be adduced. In a less degree, the same objection applies also to dilatation of the cervix by sponge tents, laminaria, etc.

The removal of myomata growing into the vagina from the inferior segment of the uterus, and of tumours that have descended from the uterus into the vagina, or that have become engaged in the cervical canal, may generally be best effected by enucleation *per vaginam*.

Pedunculated tumours of no great size are best removed by cutting through the pedicle close to the tumour with scissors curved on the flat. If feasible, the pedicle may be previously ligatured or seized with pressure-forceps. A tampon of iodoform gauze is afterwards introduced into the vagina.

As a rule, however, the class of tumours to which I am now referring do not have a distinct pedicle. Moreover, they are generally solitary, or at any rate only one has attained considerable size. They are also softer than is usual with most myomata, even when they are not of the "œdematous" variety, to which many of them belong.

Such local conditions as salpingitis, hydro-pyo- and hæmato-salpinx, pelvic and ovarian abscess, generally contra-indicate vaginal extirpation. The operation is easier in parous women than in nulliparæ. Care must be taken not to perforate the uterus, and so wound the peritoneum.

The *modus operandi* is as follows:—The field of operation

having been thoroughly disinfected, and the bowels evacuated, the patient is anæsthetised and placed in lithotomy position, with Clover's crutch between the knees. The bladder is then emptied, and the vagina irrigated with antiseptic solution.[1] Simons's specula and retractors will be found invaluable for ensuring a good view of the parts.

An assistant, pressing on the hypogastric region, pushes the uterus downwards; and the surgeon, seizing the tumour with a powerful volsella, brings it down as far as possible, and with a strong blunt-pointed scissors, a crucial incision is made into its most accessible part. The severed capsule is now peeled off, a blunt enucleator being used to aid the fingers if necessary. The bared part of the tumour is next seized with the volsella, and as it is depressed the capsule is gradually separated right up to its base, when the tumour is shelled out. It may be necessary to remove large tumours piecemeal (*morcellement*), cutting them up with scissors, aided by powerful forceps, such as those introduced by Péan. Bleeding points are seized with pressure forceps, which may generally be removed before the completion of the operation. All but the stump of the capsule is cut away.

In drawing down the tumour, the uterus may be more or less inverted. Provided this is duly recognised, and care is taken to avoid wounding the displaced organ (as also the bladder, which is often displaced as well), such an occurrence facilitates the operation, and there is no difficulty in afterwards correcting the displacement. When the tumour is embedded in the substance of the inferior segment of the uterus, the overlying uterine tissues must be incised, until the capsule is exposed. The tumour is then enucleated as above described. The wound is afterwards tamponed with a long strip of iodoform gauze, which is removed a few days later.

In properly selected cases the dangers of this proceeding are slight: Leopold[2] has had a run of forty-six operations without a single fatality, and Chrobak[3] forty-three operations with but

[1] If corrosive sublimate or similar mercurial solutions be employed, they must be weak and used with caution, for many fatal cases of mercurial poisoning have resulted from the intra-uterine injection of such solutions.

[2] *Centralbl. f. Gynäk.*, 1894, xviii. 617.

[3] *Samml. klin. Vortr.*, n.F., 1892, No. 43 (*Gynäk.*, No. 17, 369.)

one death. This mode of treatment has the great advantage of removing the disease without mutilating the patient.

For the removal of tumours contained wholly within the uterine cavity, it is best to resort either to some modification of Amussat's proceeding, or to laparotomy—the intra-uterine tumour being removed by modified Cæsarean section. The former procedure is well adapted for dealing with tumours that fall short of the largest dimensions, and for inflamed and suppurating tumours; the latter is reserved for tumours too large for removal *per vaginam*.

In vaginal extirpation, the first step is to render the tumour accessible. To effect this, the vaginal fornix is divided—anteriorly, or all round if necessary—and the bladder, having been detached from the cervix, is drawn up with a retractor, as in vaginal hysterectomy. The anterior wall of the cervix is then divided by a median longitudinal incision, and the cervical canal is laid open, until the tumour is exposed. The latter is seized with the volsella, drawn down, and deep incision is made into it. One lip of this incision is grasped with morcellation forceps, and all that it holds is cut away. By repetition of this process the whole tumour is removed piecemeal. The gravity of the operation depends much upon the size and condition of the tumour to be removed. Péan has extirpated very large tumours, such as are usually dealt with by laparotomy, in this way, with three deaths in forty operations. Vaginal hysterectomy for myomata, large enough to require removal, is an operation that is hardly ever really called for.

Removal by Abdominal Section.—Abdominal section ought to be regarded as a means for dealing with certain exceptional cases, rather than as the routine operative treatment. Most tumours of the largest size may be included in this category; as well as subperitoneal tumours, especially such as are stalked and cystic; interstitial tumours of abdominal evolution, especially when multiple and of considerable size; intra-ligamentous myomata, and submucous intra-uterine tumours, too large for removal *per vaginam*.

A median incision is made through the abdominal wall below the umbilicus. As the bladder is often unduly elevated, its

lower end should be well above the pubes; and the peritoneal sac should be first opened at its upper end. Should there be adhesions between the tumour and the great omentum, intestines, etc., these must be cautiously separated. If the union is too firm for this, omental adhesions are best overcome by excising the adherent portion of the omentum; and intestinal adhesions by excising the peritoneum covering the adherent part of the tumour. If a stalked tumour is found it may be removed, just as if it were an ovarian tumour, by transfixing the pedicle near to the uterus with a blunt needle carrying a double silk thread, each half being tied separately, and the threads cut short. The pedicle is then cut through on the distal side of the ligature, and dropped. The mortality ought not to exceed three or four per cent. As the desirability of sparing the reproductive organs whenever possible, becomes more generally recognised, the superiority of a conservative proceeding, like abdominal enucleation, over any form of hysterectomy will become apparent, especially for comparatively young women, who may bear children after this operation.

Abdominal enucleation is the best means for removing sessile subperitoneal tumours; intra-parietal tumours of abdominal evolution, especially such as grow from the fundus and anterior surface of the uterus; and intra-ligamentous myomata. When the appendages are extensively diseased, hysterectomy may be preferable.

Schröder and Martin have especially identified themselves with the improvement of this operation. The tumour, having been explored and freed from adhesions, is brought up into the wound. To prevent hemorrhage during the operation, a constricting india-rubber cord is temporarily fixed round the uterus below the tumour. To effect this, in some few cases, it may be necessary first of all to divide each broad ligament, after having ligatured the utero-ovarian blood-vessels on both sides (i.) at the pelvic margin near the infundibular pelvic ligament; (ii.) near the uterine insertion of the round ligament. The field of operation is shut off from the rest of the abdomen by packing aseptic sponges or gauze compresses—wrung out in hot sterilised water—round the uterus.

Enucleation is commenced by making a longitudinal incision into the projecting part of the tumour, so as to divide its capsule. The tumour is then seized and shelled out with the fingers, aided by a blunt enucleator. If necessary, it may be cut up and removed piecemeal. Redundant tissue about its bed is cut away, and the cavity is uniformly closed throughout by one or more rows of super-imposed buried catgut sutures. Over these the divided peritoneum is drawn, and its infolded serous margins are united by a row of Lembert's sutures. The elastic constrictor is removed, and any bleeding points are secured. The toilet of the peritoneum is performed. Lastly, the stump is examined, and when satisfactory hæmostasis has been secured, it is dropped into the abdomen, and the operation is completed as in ovariotomy.

Should the uterine cavity be opened, as frequently happens in dealing with large tumours, it may be closed with a continuous catgut suture, over which other rows of buried sutures are placed. Zweifel's[1] results show that there is no scientific basis for the prejudice against opening the uterine cavity, on account of the supposed risk of septic infection; and his experience agrees with the results of bacteriological research, which have repeatedly demonstrated the absence of pathogenic microbes from the healthy uterus. In the highly exceptional event of intractable hemorrhage taking place from the sutured pedicle, the bed of the tumour may be opened up, and plugged with a long strip of iodoform gauze. The margins of the uterine wound are then sutured to the parietal peritoneum at the lower part of the abdominal incision, on each side, the free end of the gauze tampon being brought out at its lower angle. The rest of the abdominal wound is then closed in the usual way. To make assurance doubly sure, Alexander[2] anchors the fundus uteri to the abdominal wound with silkworm-gut sutures, passed through the entire thickness of the latter, and tied externally. When the cavity of the uterus has been opened, some surgeons pack the bed of the tumour with a strip of iodoform gauze, the free end of which is passed into the vagina. Of 141 such

[1] *Centrabl. f. Gynäk.*, 1894, xviii. 321.
[2] *Brit. M. J.*, 1898, i. 1318.

operations by Martin,[1] 26 died, or 18.4 per cent., but th includes all his early operations before the *technique* was perfected; of the 20 cases reported, only 1 was lost. Engström[2] has done 100 operations, with only 5 deaths; but in more than half his cases the tumours removed were not very large. With regard to the remaining operations practised for the removal of myomata, partial hysterectomy (hystero-myomectomy) is preferable to abdominal panhysterectomy, and the latter is preferable to panhysterectomy by the "combined method"; but the truth is, the more the field of these mutilating proceedings is contracted the better.

A CASE OF HYSTERECTOMY FOR FIBROID TUMOUR OF UTERUS, WITH INTRA-ABDOMINAL TREATMENT OF PEDICLE.[3]

BY

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I HAVE put together the notes of this case thinking it would be of interest to the Society, inasmuch as it is the first operation of this description that has been done in Bristol.

It is a far more satisfactory operation than the old one of treating the pedicle with some kind of mechanical clamp outside the abdominal wall, for the following reasons:—

(1) It is absolutely aseptic, while in the old operation there was always danger of suppuration of the pedicle.

(2) No mechanical means are required for arresting hemorrhage, as all vessels are tied at the time of division.

(3) There is no drag on the pedicle and practically no risk of peritonitis.

[1] *Deutsche med. Wchnschr.*, 1893, xix. 709.

[2] *Mitth. a. d. gynaek. Klin. d. O. Engström in Helsingfors*, 1897, i. 1.

[3] Paper read before the Bristol Medico-Chirurgical Society, January 11th, 1899.

(4) Bland Sutton asserts (and certainly has proved it in his own operations) that this method possesses no more risk than an ordinary ovariotomy. The latest statistics shew that the mortality is less than it was with the old fashioned operation, which the late Mr. Greig Smith clung to even to the end of his life.

The patient, M. H., aged 35, was sent to me by Dr. Freeman on November 1st, 1898. She had had two children, the last ten years ago. Menstruation commenced at the age of 13, always lasted five to six days, and was always excessive.

About a year before admission patient had noticed some swelling of the abdomen; at the same time she had great pain in this region, which varied in intensity. Four months ago she noticed the swelling had increased considerably in size and was causing still more pain: her periods also now became more excessive.

On examination there was a large, soft, semi-fluctuating tumour to be felt in the median line of the abdomen, rising out of the pelvis. It was extremely painful if handled at all; the sound passed three inches, and the tumour was apparently in front of the uterus itself. By some of my colleagues it was thought it might be the bladder or some diverticulum of that organ.

On November 10th, the patient being placed under ether, I made a long incision into the abdominal cavity, and at once brought out a large fibroid tumour (produced) growing from the fundus of the uterus. A pedicle needle threaded with stout silk was passed through the broad ligament, and the ovarian arteries and veins were ligatured on each side and cut away from the uterus. The ovaries were left untouched, this being considered a very important part of the operation. It is not at all necessary to remove the ovaries, and it is considered much better for the patient to retain them if possible.

The pedicle needle was now pushed through the broad ligament on each side below the uterine arteries, and these were ligatured after some slight difficulty. This appears to be the most difficult step of the operation.

A semi-circular incision was now made with the convexity upwards on the anterior aspect of the uterus, below the point where the tumour joined the body of the uterus: a similar flap was made posteriorly in the same manner, and then the tumour and upper part of the uterus were cut away, carrying the knife down deeply below the flaps and taking away as much as possible. A few bleeding points in the flaps were tied, and then they were brought into exact apposition by means of silk sutures sewn deeply through the flaps. Then, there being no hemorrhage, the pedicle was dropped into the pelvis and the abdominal wall sutured in the ordinary manner.

The patient was put to bed, and from that time had not a bad symptom. She was able to get up on November 28th, or eighteen days after the operation.

Now, is not this a contrast to the old hysterectomy, with a sloughing pedicle hanging out from the abdominal wall with foul pus discharging from the stump, the chance of peritonitis from dragging on the pedicle, the risk of hemorrhage which may

easily be fatal from slipping or loosening of the clamp, the danger of some drop or so of foul pus getting into the peritoneal cavity, the separation and final healing of the stump not taking place for many weary weeks? Whereas this patient runs no risk, but is well and walking about on the eighteenth day after the operation.

In the discussion on Dr. Newnham's case, Dr. AUST LAWRENCE stated that this mode of operation would in the future in a good many cases be preferred to the old plan of fixing the stump outside the abdomen, and he looked forward to the mortality being very much reduced in this class of operation. Dr. Aust Lawrence, however, spoke against any operation being done in a large number of cases of myoma uteri, as the symptoms did not warrant interference in at least 80 per cent. of the cases.—Mr. ROGER WILLIAMS suggested that the operation done in this case might more appropriately be called "Abdominal myomectomy," since nothing but the tumour was removed. He was glad to see that the importance of preserving as much as possible of the reproductive organs was now beginning to be recognised. For the treatment of a non-malignant disease like myoma of the uterus, he thought myomectomy was a much superior operation to hysterectomy, which should be reserved for a few exceptional cases not otherwise operable. After myomectomy, women might bear healthy children; and with Zweifel's *technique*, the mortality of myomectomy was only about 5 per cent.—Dr. WALTER SWAYNE, recalled to the recollection of those present a paper by Stuart Nairne, of Glasgow *(Prov. Med. Journ.*, 1889), in which he not only dealt in this manner with the stump after hysterectomy, but related a long series of cases of myomectomy with most successful results. The retaining of the ovaries, if healthy, apart from the quicker convalescence, was a great advantage of the more modern method of operating. In considering the relations between the success of the intraperitoneal and extraperitoneal methods of treatment, it should be remembered that many of the former cases were operated on for small tumours, and the results were likely to be superior to those in cases where large tumours with dense adhesions existed; apart from this, however, the more modern method was undoubtedly superior to the old, and no doubt would become generally adopted in the future.—Mr. CARWARDINE spoke in favour of hysterectomy by retroperitoneal treatment of the stump when possible.—Mr. MORTON thought that though the treatment of the pedicle by constriction with a wire in the extraperitoneal method seemed a barbarous and unsurgical proceeding, yet it was well to remember that it had a smaller mortality than the intraperitoneal method, and that was the main consideration. We could not, of course, judge of the respective merits of the two methods unless we had a series of cases treated by each; one case was of no value for such a purpose. He thought the best plan was to begin the operation with everything prepared for either method, and then to be guided by the condition of the growth. He thought, from an examination of the specimen, that Dr. Newnham's case was one particularly suited for the intraperitoneal method.—In reply, Dr. NEWNHAM said: It is evident that Mr. Morton has not seen the latest statistics on the subject of mortality, for in the hands of

Bland Sutton and some German surgeons the mortality is reduced to the same level as the rate for ordinary ovariotomy. It is manifestly very easy to open the abdomen and remove a fibroid with an ordinary thin pedicle; but the difficulty arises when it is necessary to remove the tumour and the greater part of the uterus itself, the one not being capable of being distinguished from the other.

SYMPHYSIOTOMY.

BY

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THIS operation was originally proposed by Sigault, a French medical student, in 1768, as a substitute for Cæsarean section, and he performed the first successful operation in 1778, as a result of which it was warmly advocated and often performed for a few years; the first operation in England being performed by Welchman, a Warwickshire surgeon, in 1782. As, however, the results proved disappointing, the maternal mortality being very high and not much inferior to that after Cæsarean section, being about 33 per cent. in the former to 42 per cent.[2] in the latter case, it fell into disuse in a comparatively short time. Being revived by Morisani, of Naples, in 1866, it was practised with greater success, and, the mortality falling greatly on the introduction of antiseptic methods, rose again into favour; and at the present time a large number of cases of recent date are on record.

Originally introduced as a substitute for Cæsarean section, it has now come to be regarded as the proper substitute for craniotomy, since, although the maternal mortality is rather larger, the child, instead of certain destruction awaiting it, has a very good chance of survival. It has also been performed deliberately at term in cases of contracted pelvis instead of the induction of premature labour, and here the results as

[1] Read before the Bristol Medico-Chirurgical Society, December 14th, 1898.

[2] Churchill's *Midwifery*.

regards the life of the fœtus are also very much better, but the maternal mortality is higher. The combined mortality rate in the hands of Pinard and Tarnier[1] respectively is 18.36 for the former in symphysiotomy, and 20.29 for the latter in induced labour. As a substitute for craniotomy it is always performed as an operation of emergency, and it is under this head that the operation described in this paper was performed.

The general indications for its use may be briefly stated as follows:—(1) Absolute contraction of the pelvis when the conjugate diameter is above $2\frac{3}{4}$ inches; (2) relative contraction when the fœtal head, not being enlarged by hydrocephalus, is too large to pass through a normal sized or only slightly contracted pelvis. It is not suitable for cases in which a tumour impacted in the pelvis or bony outgrowth prevents the descent of the head. An essential condition for its performance is, that the child should be alive. The time for operating is when the first stage of labour is complete or almost complete, and the cervix so dilated as to allow of the easy application of the forceps and the passage of the head through it. It should not be performed for rigidity of the soft parts, or when great rigidity is present. Most careful attention to antiseptic measures is necessary, and the patient should as far as possible be prepared as if for an abdominal section, the pubes being shaved and the skin cleansed as perfectly as circumstances will admit. The operation itself is performed by two methods—the subcutaneous and the open methods. The former is the preferable, as the longer the incision in this region the greater the difficulty in preventing contamination of the wound. All that is necessary is, that the incision should be of sufficient length to allow of the free passage of the finger behind the pelvic articulation.

Two assistants are necessary in addition to the anæsthetist, as after section of the joint care must be taken to avoid the too wide separation of the bones during the passage of the head through the pelvis. The dangers to the patient are from hemorrhage and sepsis: the first, however, is easily controlled, and the second should not be likely nowadays. The open method by long incision is said to cause less hemorrhage, since

[1] *Presse méd.*, 1895, 265.

this is usually produced by laceration of the soft parts and vessels around the joint on its separation, but the increased risk of contamination rightly seems to render the subcutaneous method preferable. The most experienced operators do not consider that wiring or suturing the bones together is of any material advantage, and in several cases partial necrosis of the bones and troublesome fistulæ have resulted where this method of treatment has been adopted. The gain in space which is the result of the operation is as follows:—As much as 1¼ inches may be gained as a maximum: that is, when the maximum divergence consistent with the integrity of the sacro-iliac joints is caused, the divergence is just about three inches, and beyond this it should never be allowed to pass. Since the transverse diameter increases very nearly to the same extent as does the distance between the separated ends of the bone, it is obvious what an increase in the sectional area of the pelvic canal can be gained. In the case described the true conjugate was estimated at 2¾ inches; and as the separation of the bones during the extraction was about 2½ inches, nearly an inch was gained in the antero-posterior and about 2¼ inches in the transvere diameters bringing the available space up to that required for an ordinary forceps extraction, namely, to 3¾ inches antero-posterior, and to considerably more than the normal in the transverse, which, although not measured, was obviously contracted, though not to so great an extent as the antero-posterior. The following is the history of the case:—

Mrs. S., aged 25, primipara, at the full term of pregnancy. Labour pains commenced at 3 a.m. on the 22nd of October, 1898. A midwife attended her, and finding that no progress had been made by the evening of that day, administered a grain of opium in pill. Twenty-four hours later, as the head did not advance, she called in a medical man, who, finding on examination that the pelvis was very contracted, advised her removal to the Bristol Royal Infirmary, to which she was admitted on the evening of the 23rd of October. On admission her condition was as follows:—

The patient is a small woman, showing marked signs of rickets. The abdomen, distended by the enlarged uterus, is more than usually prominent, and the fundus uteri reaches to the ensiform cartilage; the pains strong, and recurring every five minutes. Abdominal palpation shows that the fœtus is lying in the third position, the head presenting; the fœtal movements vigorous, and the uterine contractions strong and regular. On auscultation the fœtal heart is heard to the right of the middle line and below the umbilicus, rate about 140 to the minute. The head was felt to be above the brim, and could not be pressed

down into the pelvis. On vaginal examination the promontory of the sacrum was easily reached, and the diagonal conjugate was found to be 3¼ inches, the os nearly fully dilated, and the soft parts soft and dilatable. The transverse diameter was also found to be lessened, and the ilio-pectineal line within easy reach throughout its whole length. After an attempt to effect delivery with axis-traction forceps—which, as expected, was unsuccessful,—it was decided to attempt delivery by symphysiotomy. After careful cleansing of the external parts and skin, an incision about 1½ inches long was made just above the upper edge of the pubes in the middle line, and carried down for a short distance through the soft parts below the upper level of the symphysis, but not extending more than half an inch below. The incision was carried above through the interval of the tendons of the recti, and a short transverse incision was made to the left side to allow of the introduction of the finger, when the posterior surface of the symphysis was cleared and a sickle-shaped Galbiati's knife introduced, and the separation of the fibro-cartilage commenced above in order to obtain a groove to guide the blade, as the joint was found to be to the left of the middle line. The knife was then carried down the back of the joint and its probe-pointed end made to project against the anterior vaginal wall, the urethra being pressed to one side by means of a sound. The knife was then worked through the joint from below upwards and behind forwards, and the joint divided. The two halves of the pelvis at once sprang apart, separating about an inch, and rather free hemorrhage occurred. This was controlled by iodoform gauze pushed into the wound. The wound was now covered with a sponge-cloth wrung out of hydrarg. perchlor. solution 1—1000. The head immediately descended to a certain extent, and the axis traction forceps were applied. Under steady, but not too strong, traction the head descended, the patient's thighs being supported by two assistants, and delivery effected in about twenty-five minutes. The placenta was expressed twenty minutes later, and a slight laceration of the perineum repaired and the uterus washed out with hot perchloride of mercury solution (1—3000). The superficial wound was sewn up with silkworm-gut sutures, two stitches taking up the fibrous structures on the front of the bone, the packing pressed backwards from between the bones, the bones pressed together, and the sutures tied, the pelvis being brought together by strong traction on the ends of a long piece of unbleached calico bandage passed around the pelvis, the wound dressed with iodoform gauze, and a strong bandage fixed firmly around the pelvis.

The further progress of the case was uneventful. The wound united by first intention, except a small portion at the lower end where the skin adaptation was not quite accurate. The temperature on two occasions reached 100° F. The sutures were removed on the sixth day. The calico support to the pelvis was replaced on the third day by a strong webbing belt tightly buckled around the ilia, while a second belt encircled the trochanters. The catheter was used for the first four days. The patient was allowed out of bed on the twentieth day, and went home on the twenty-eighth day. She has had no disturbance of locomotion, and walked over two miles to be shown at a medical meeting in the seventh week after operation. The child, a male, was born alive, and at birth its condition was as follows: Weight, 8 lbs.; length, 21 ins. Measurements of the head: Maximum vertico-mental diameter, 5¼ ins.; sub-occipito bregmatic diameter, 3¾; occipito-frontal, 4½; fronto-mental, 3⅛; biparietal, 3⅜; bitemporal, 3¼; bimastoid, 3. The child, now three months old, weighs 12 lbs., and seems perfectly healthy. The mother was able to nurse it; she did so for six weeks entirely, and still does so partially.

I examined the mother on January 14th, as she complained of some prolapse of the anterior vaginal wall. I found the symphysis with a separation of about ⅜ inch, apparently perfectly firm, and the conjugate diameter not appreciably altered; otherwise she appeared to be in perfect health.

The conditions under which the operation was performed were extremely favourable. Labour was not so far advanced as to prejudice the mother's chance of recovery; in fact, the os was only fully dilated just before the application of the forceps; plenty of assistants were at hand, a good light and all appliances for carrying out antiseptic and aseptic methods; but at the same time the difficulties which would arise in less favourable circumstances are not insuperable, and the operation itself is not in reality much more difficult than a severe craniotomy, which latter, if a living child is to be operated on, is a most loathsome proceeding. For the very careful notes of the case I am indebted to Mr. A. L. Flemming, resident obstetric officer, and Mr. P. G. Stock.

After the reading of Dr. W. C. Swayne's paper, Dr. J. G. SWAYNE said that about 1777, when the operation was first introduced, his grandfather, Dr. Griffiths, was beginning his medical education, and afterwards practised in this city more than fifty years. Mr. J. C. Swayne, Dr. J. G. Swayne's father, was Dr. Griffiths's apprentice; he passed the College of Surgeons in 1808, and practised for forty years in Bristol, until he retired in 1848. If symphysiotomy had ever been performed here, he would have heard of it from his grandfather, father, or Mr. Richard Smith, the senior surgeon to the Bristol Infirmary. This was almost certainly the first case in which the operation had been performed in this city.

A CASE OF ACUTE ULCERATIVE ENDOCARDITIS.[1]

BY

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CASES of ulcerative or malignant endocarditis are always interesting, but my special reasons for bringing this one before the Society are:

(1) Its unusual acuteness.

(2) The persistent pyrexia, without any rigor or marked remission in temperature.

(3) It is another example of the value of Widal's test in cases of, or resembling, enteric fever.

[1] Read before the Bristol Medico-Chirurgical Society, November 9th, 1898.

The patient was a farmer, aged twenty-nine years, of somewhat slight build, who, with the exception of occasional mild rheumatic attacks, none of which were sufficiently severe to induce him to consult a medical man, had always enjoyed good health. There is nothing of interest in the family history.

I first saw him on Monday, October 17th, 1898. He then told me that for the past week or ten days he had felt tired, and suffered a good deal from headache and pains in the back and limbs, but had continued his work until the previous day; the bowels had acted regularly each day, and he had not observed anything unusual about the motions. For some days he had been suffering from a small sore on the outer side of the left heel, caused by his boot, but had had no tenderness or enlargement of the lymphatic glands, nor could I get any history of lymphangitis.

When I first saw him he was up and dressed, complaining of general malaise, frontal headache, pain in lower part of the back and limbs, chiefly in the larger joints, and of some slight cough, with rusty-coloured tenacious expectoration. There was no history of shivering. Temperature was 103°, skin just moist, no redness of joints and no effusion into them, but slight tenderness over them and some pain on movement. Respirations about twenty per minute, and no abnormal sounds to be heard in the lungs. There was, however, a loud diastolic aortic murmur, with, so far as I could ascertain, very little if any displacement of the apex-beat. Pulse about 100. Tongue clean and moist, and abdomen apparently normal. I suspected that he was suffering from a small patch of deep-seated pneumonia, and possibly influenza. I ordered him to bed, and treated him with salicylate of sodium, with liquor ammoniæ acetatis and sal volatile.

For the first five days of my attending him he appeared to be progressing satisfactorily; the temperature ranged from 103°—104°, cough and expectoration diminished, the cardiac bruit did not alter in character. The bowels continued to act once each day, the motions being dark-coloured and formed; tongue remained moist and was very little furred; there was still, however, some headache and pains in the joints, especially

shoulders, elbows, hips and knees, with tenderness over them, but no effusion; and although I could not detect any abnormal physical signs in the lungs, I saw no reason to change my diagnosis. On the evening of the fifth day patient was a little delirious, and when I saw him on the sixth day (Saturday) was certainly worse. Temperature was 104°, but the pulse and respiration had risen to 120 and 24 respectively; still, there was no alteration in the physical signs of the chest. The tongue was becoming dry; abdomen a little flatulent, with some tenderness over region of the bladder, but no gurgling over cæcum, and no typhoid spots; the spleen extended to edge of the ribs; there was still a little delirium; no deafness, but some slight tinnitus, probably due to the salicylate of sodium, I thought, and the patient answered questions sharply. Pupils equal and of about the normal size, reacted readily to light; skin much more moist; trace of albumen, but no blood in urine, and some tremor of muscles. The patient was lying on his back, but he had done so all through the illness, on account of the pain in the shoulders. The next day (Sunday) pulse had risen to over 140, and respiration to 36; delirium continued, tongue was dryer; three light-coloured loose motions had been passed in the previous twenty-four hours; spleen could be distinctly felt just below edge of ribs; there was no increase of abdominal distension, but slight gurgling over the cæcum; no typhoid spots, but two small patches of petechiæ—one just over the left anterior superior iliac spine, and the other in right hypochondrium; tremor much more marked and subsultus present. Towards night, delirium increased, temperature rose to 105°, and urine was passed unconsciously. At midday next day patient would still answer questions rationally, pulse and respiration 144 and 48 respectively; the aortic diastolic bruit was still the only murmur present; there was some impaired resonance and bronchial breathing at the base of left lung, but no crepitation or sign of any general bronchial catarrh. Dozens of petechiæ over chest, abdomen, back, and especially the extremities, those on the hands and feet being the largest. There was no evidence of any affection of the cranial nerves. Abdomen a little more distended, but no tenderness, and no action of the bowels since the previous

morning. The blood did not give the typhoid reaction to Widal's test. The patient gradually became more and more drowsy, general diffuse râles became audible over both lungs; temperature rose steadily to 106.2°, and in spite of 30 grs. of quinine and frequently-repeated doses of phenacetin, together with cold sponging, only fell to 104.6° before death, which took place early next morning, or on the ninth day of my attendance.

At the *post-mortem* examination, made thirty-two hours after death, in which Dr. J. O. Symes kindly assisted me, the heart was found to be a little enlarged, the left ventricle being hypertrophied. The aortic valves, which were incompetent and also considerably thickened and puckered, had several small vegetations upon them and also some ulceration; there were also two small patches of lymph upon, and slight ulceration of, the endocardium of the left ventricle, otherwise the heart appeared normal. There were petechial patches over the visceral pleura; but the lungs, with the exception of considerable engorgement and *post-mortem* changes, were normal. Spleen was about twice the natural size, studded with small infarcts; the kidneys also were dotted with petechiæ and a few infarcts; the intestines normal; liver normal. We could not obtain leave to examine the brain. Cultures were subsequently made from the infarcts by Dr. Symes, and found to consist of pure streptococci; and in sections of the aortic valves, kindly made for me by Mr. A. L. Flemming, are to be seen streptococci and staphylococci.

The complete absence of any rigor or of marked remissions in the temperature, which are so characteristic of ulcerative endocarditis, made the nature of the case somewhat uncertain; indeed, until after the fifth day, I saw no reason to doubt the original diagnosis of a small deep-seated pneumonia. At about this date, however, the enlarged spleen and typhoidal condition of the patient led me to strongly suspect enteric fever, especially with the history of an indefinite onset of about ten days, followed by the continued pyrexia; still the rapid downward progress of the case, with the absence of deafness, bronchial catarrh, or definite intestinal symptoms, with the exception of the loose motions on

one day, combined with the clean tongue and mental acuteness of the patient, seemed strongly against this view, and pointed rather to a form of septicæmia, and my opinion was subsequently strengthened by the absence of the Widal reaction. With the exception of the small sore on the foot previously referred to, and which did not appear to have caused any constitutional symptoms, I could discover no external source, and was thus led to a diagnosis of ulcerative endocarditis of the acute typhoidal type. I regret, however, that no cultures were made from the blood before death.

These cases are quite different in their clinical symptoms from the more common forms of ulcerative endocarditis, namely, the subacute and chronic cases, and are especially severe and fatal, the patient usually being seized with a rigor when apparently in good health, or convalescent from an acute illness, especially rheumatism, and are said by Mitchell Bruce to always result in death within fourteen days; in fact, a case has been known to terminate fatally in two days. The failure of every means of cure hitherto employed in these acute cases serves to impress on us the importance of preventive treatment; to protect subjects with chronic valvular disease against zymotic diseases, and also attend with special care to the treatment of suppuration. When ulceration has occurred, the case must be managed on the general principles applicable to all acute specific fevers. Drugs in great variety have been tried with little benefit, including mercurials, quinine, and other antipyretics, eucalyptus, turpentine, salicylates, and sulphocarbolates. The two latter have, however, been attended with success in a few instances in the chronic form of the disease. During the past few months some cases have been treated with injections of the anti-streptococcus serum, and although some good may very possibly be done in the subacute or chronic cases, so far as I can find, no acute case has been successfully treated by this means, and, indeed, from the rapidly fatal issue of these cases, so powerful a dose of the serum would be required that the percentage of recoveries by this means of treatment would be extremely small.

In conclusion, in addition to Dr. Symes and Mr. Flemming

for pathological help, I must thank Dr. Shingleton Smith for clinical assistance in the case.

In the discussion which followed the reading of Dr. Ormerod's case, Dr. SHINGLETON SMITH commented on the rarity of these cases of acute fulminating septic endocarditis. He alluded to the difficulty of differentiating them from enteric fever, and to the utility of the Widal test for this purpose. In allusion to the streptococcic serum, he stated that his experience of it in a fatal case of pemphigus foliaceus had not been favourable.—Dr. WALDO said this case bears out the view that when pneumonia is associated with ulcerative endocarditis the latter is of an unusually malignant type. There are present in this condition all the signs of septic infection, and, as Wilks has well said, this disease should be regarded as one of arterial pyæmia. The treatment, in his experience, was always unfavourable. He had administered intestinal antiseptics of various kinds, and had given perchloride of mercury hypodermically, but, he must confess, with very little good result.—Dr. B. M. H. ROGERS showed a heart with large vegetations on two of the aortic valves, which was taken from the body of a gipsy girl, aged 11, who died in the Children's Hospital, after only three days' illness. She was taken ill on a Thursday, and when admitted to the Hospital was practically moribund. A loud murmur was heard over the base of the heart, its loudest spot being over the pulmonary artery. At the necropsy the left ventricle wall was found to be much hypertrophied, and two vegetations were present on the aortic valves. There were no infarcts found anywhere. For some months previous to her fatal illness, her parents had noticed that her abdomen was much enlarged, and at the necropsy this was ascertained to be due to a much enlarged spleen. The substance of this organ was very hard, not friable as is usually met with in cases of malignant endocarditis. He mentioned this case to illustrate the exceedingly rapidly fatal issue that may follow infection of this sort, death resulting after only three days' illness.—Dr. G. PARKER said that in a case of ulcerative endocarditis recently under his care the patient's blood showed the presence of staphylococcus albus, but no serum at present existed which had any effect upon this organism. He had used the streptococcal serum as well as quinine, and injections of corrosive sublimate, without influencing the course of the disease.—Dr. J. O. SYMES said that the organism in Dr. Ormerod's case proved on cultivation to be the streptococcus longus, and colonies of the same were found in sections of the valves. The blood did not give Widal's reaction. In another case, with well-marked vegetations on the valves, no organisms could be found in the tissues after death. He did not regard this as a true infective endocarditis. For purposes of diagnosis, two or three cubic centimetres of blood should be taken from a vein and cultures made. Treatment by anti-streptococcus serum was a specific treatment, and useless against other infections.—Dr. WALTER SWAYNE said it was important to know if those who had used the anti-streptococcic serum largely had noticed any ill effects to follow; it was generally stated that ill effects were not experienced, and, that being so, it would appear that the empirical use of the serum was not only justifiable, but to be recommended, since the difficulty of identifying scientifically a true case of streptococcic infection was not only great but required time which might be of the greatest value. He would feel inclined to use the serum in suspected cases without waiting for bacteriological verification of the true source of the poisoning,

although such a course might be said to be scientifically incorrect. —Dr. F. H. EDGEWORTH said that though a definite diagnosis during life of infective endocarditis could only be made in the presence of three phenomena—a heart-murmur, fever, and infective emboli—and this endocarditis could only be held to be definitely due to streptococci when examination of the blood proved their presence; yet insomuch as this form of endocarditis was in the majority of cases due to these particular micro-organisms and there was no evidence that the injection of anti-streptococcic serum ever did harm, it was permissible for one to use this method of treatment in cases where the evidence was incomplete. He had found in several cases of rheumatic fever with endocarditis, where the fever continued after the arthritis had subsided and there was no lesion other than the cardiac one to account for the fever, that an injection of anti-streptococcic serum had caused a rapid disappearance of the fever, whilst apparently the cardiac mischief did not subsequently further advance.—Mr. ROGER WILLIAMS mentioned that in certain cases of acute mastitis with septic complications the latter had been found to be due to the presence of staphylococci, which some pathologists thought were harmless, and he asked whether any analogous condition was found in ulcerative endocarditis.

ACHONDROPLASIA.[1]

BY

CHARLES E. S. FLEMMING, M.R.C.S., L.R.C.P.

ACHONDROPLASIA, more pleasantly but less properly called fœtal rickets, though not common, is of sufficient importance in its after-effects to be of more interest than a mere pathological curiosity. It is a disease of intra-uterine life, characterised by great shortness of the limbs, which are bent and markedly out of proportion to a fully developed trunk, and an enlarged abdomen. The head is rather large, and there is considerable thickening of the skin of the whole body.

Mrs. H., an anæmic, but otherwise healthy woman, mother of one healthy child, was in the eighth month of her pregnancy confined of a stillborn male child; the second stage was prolonged, and owing to the soft state of the head there was some

[1] A Paper read before the Bath and Bristol Branch of the British Medical Association, November 30th, 1898.

difficulty in diagnosing the presentation, which was first vertex. The child died, apparently during labour. The placenta was normal in appearance. The child had a remarkable appearance.

FIG. I.

Photograph of Stillborn Child affected with Achondroplasia. Reduced one-fourth.

(Fig. 1.) Except for the enlarged belly, there was little to note in the trunk; the head was rather large, but so soft and shapeless that the nurse's description of it as "real pudden-headed" was not hyperbolical; its condition is well shown by the mark of the string which had to be used to hold it in position for photographing. Only towards the base of the skull could any resisting bone be felt. The face was expressionless and heavy, the nose wide and flat, and the skin about the face and neck appeared very thick, so much so that in the neck it was in a large fold. The most marked deformity was in the limbs; these were very short in proportion to the trunk, markedly curved and bent, with relatively small hands and feet. The width from shoulder to shoulder was normal, but the arms were very short and deformed; the arm and forearm both bent to nearly a right angle, the concavity being forwards and inwards; in addition the wrists were strongly pronated. For the purpose of photographing, the body was "displayed proper," as they say in heraldry, so that the pronation is less marked in the picture than it was in reality. The hands were very small, but not deformed.

The legs, like the arms, were short and bent; the curve of the thigh was a double one, and not so acute as in the arm; the most marked curve was at about the junction of the lower and middle thirds, and had its concavity forwards; above this was a slight curve backwards, and a little inwards. The legs had the most marked deformity of all, being bent backwards to less than a right angle. The feet were in a position of equino-varus, due to deformity rather of the leg than of the tarsus.

The skin was everywhere thickened, and on section it was clear that this thickening was due to an increase in the deeper areolar layer, and not merely to an increase in the subcutaneous fat; and in the penis, where there is no fat, the skin was markedly thick. The tongue appeared too large for the mouth, as it does in those cases of sporadic cretinism where there is a great increase of connective tissue at its root.

There was no gross nor microscopical change in the thyroid, and all the organs of the thorax and abdomen appeared normal. The cartilaginous epiphyses of the long bones (Fig. 2) were enlarged in every direction, and did not present the usual white line at their junction with the diaphyses.

FIG. 2.

Photograph of longitudinal section of Femur and Tibia from the same case. Four-fifths actual size.

The bones were easily cut with a knife from end to end; the shafts of the long bones had merely a thin casing of bone (owing to the obliquity of the section, this appears thicker in the femur than it really was), and the cancellous bone inside felt only gritty to the knife. The cranial bones were no stiffer than a sheet of writing paper. The clavicle and ribs, though soft, were normal in shape and size, and the pelvis presented no marked deformity.

When examining the minute anatomy of the cartilage in a section of a normal epiphysis at the same period of fœtal life, we see from above downwards the oval masses of proliferating

cartilage cells, the calcification of their capsules and the formation of the primary areolæ, then the excavation of the secondary areolæ in this calcified cartilage by the osteoclasts, and finally the deposition of new bone on the walls of the secondary areolæ by the osteoblasts. Now in a section of the same bone, tibia, from the case of achondroplasia, we see a sparseness of the proliferating cartilage cells, and only a few calcified capsules with shrunken cells, *i.e.*, a deficiency of the primary areolæ, and the proliferating cells abut immediately on a mass of osteoblasts and osteoclasts in which are but few calcified or ossifying trabeculæ; it is noteworthy that the process, such as it is, is fairly regular. Further on, in the shaft, we find great quantities of these round cells and a few bony trabeculæ, but the periosteal layer of bone appears fairly normal.

In the section of a parietal bone we see greatly delayed ossification. The appearance of the cartilage suggests no loss of power to grow, but an almost complete incapacity to carry out its bone-forming duties; the cells grow, but refuse to calcify, and the round cells crowd round and absorb them, the deficient calcification apparently interfering with the ossifying function of the osteoblasts.

It would seem then, that while owing to some dystrophy the skeleton maintained for a long while its embryonic form, there was some special affection of the epiphyseal cartilage whereby its ossification was not only delayed but reduced almost to a minimum.

While then the periosteum is forming bone, the cartilage on which the length of the bone depends is inactive, the consequence being that although the bone has a normal, or nearly normal, transverse diameter, it is at the same time greatly reduced in length. Bones in the growth of which the cartilage takes but a small part, such as the clavicle and the ribs, are not shortened, and bones developed in membrane are of natural size.

The lesions of the long bones produced by the delay in ossification are so symmetrical and of such a nature that they cannot be considered as due to any external accidental cause. They

are evidently due entirely to muscular action. (Fig. 3.) The biceps has bent forwards the humerus, and the flexors and pronators of the wrist have rotated and flexed the radius and ulna.

FIG. 3.

Radiogram of the same case. Reduced one-fourth.

In the lower extremity, as a longitudinal section shows, there is a forward curve of the femur due undoubtedly to the action of the quadriceps extensor; the slight curve above, backwards and inwards, is, I suppose, produced by the adductors of the thigh and flexors of the leg. The tibia is evidently doubled up by the gastrocnemius and soleus.

The following short description of this disease is gathered from published papers, the most important being one by Dr. Porak[1] of Paris. Achondroplasia is characterised by lesions of the skeleton which are symmetrical and chiefly in the long bones; these are thick, short, hard, and compact, and where bent the bending is always in the diaphyses and in the same direction. It is not a question of local, or rather special lesions of the bones, for these are accompanied by profound nutritional lesions, in particular a great thickening of the skin.

The affection does not show itself in the trunk or the head, except at the base of the skull, which is contracted, and has the bones prematurely united. Some cases are, however, hydrocephalic. It is a disease which comes on and completes its evolu-

[1] *De l'Achondroplasie.*

tion in the earlier months of pregnancy, so that when the child is born the lesions are cured and the initial disorders escape observation. However, one authority says that the disease may be active until the twenty-sixth week.

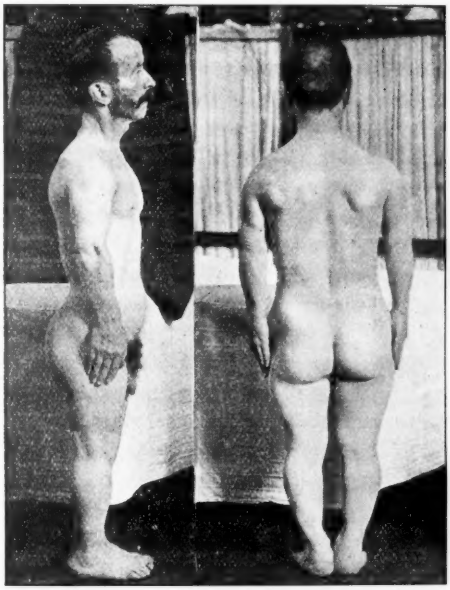
The bone when formed is very hard, and the epiphyses are greatly enlarged. The whole appearance of a case of achondroplasia may be best described as cretinoid, and the disease is probably closely allied to, if not a phase of, sporadic cretinism. The chief, if not the only, difference between my case and those already described is the length of time during which the disease remained active. When it has ceased early, we should expect shortening, but little bending, of the bones; but when it has lasted long and the muscles grown strong, the bending of the bones will probably be increased in proportion to the lateness of recovery.

It is necessary to distinguish these cases from inherited syphilis and from rickets. In the former there is a great overgrowth at the diaphyso-epiphyseal junction, where later the tissues degenerate, and we may then find dislocation of the epiphyses. There are characteristic osteophytic productions under the periosteum, and the long bones far from being shortened may actually be lengthened. There are generally other concomitant signs of syphilis. Rickets as a rule does not occur until about the second year of life. Kassowitz, however, says that it is a frequent occurrence in stillborn or early dying children, but passes unnoticed, as it is not perceived until a child begins to walk, but it does not seem to be obvious why the lesions of the ribs and arms should not be observed.

In rickets the lesions are not so symmetrical, the ribs are nearly always affected; the curves in the long bones may be merely exaggerations of the natural curves, and most often are due to pressure, and they are accompanied by actual, not merely relative, thickening of the bone; as a rule the curves that occur early are near the epiphyses, and the lesions are often isolated. The microscopic appearance of a rickety epiphysis is characteristic; there is an increased proliferation of cartilage cells, the line of junction with the diaphysis is markedly irregular, the secondary areolæ are large, vascular, and irregularly disposed,

islets of cartilage are seen in the osteoid trabeculæ and in the medullary cavities, and medullary cavities occur in the epiphyseal cartilage.

In the discussion which followed, Dr. F. H. EDGEWORTH said: Achondroplasia is probably not such a very rare disease, though cases do not come under observation for treatment. I know by sight at least four persons in Bristol who are affected with it, in addition to the one whose photographs are here reproduced (Figs. 4 and 5), and who was admitted to the Bristol Royal Infirmary eighteen months ago for



FIGS. 4 & 5.

Case of Achondroplasia.

gastro-intestinal catarrh by the house physician, Dr. Stack, who recognised the skeletal condition.

The patient, now 59 years of age, is one of a numerous family, the other members of which are of normal stature. He has no children. His height is 4 feet 8 inches, and the pictures show that this shortness of stature is due to deficiency in the length of the long bones of the legs. The long bones of the arms are similarly very short. The trunk shows no abnormality. The muscles are very well developed, through having

short bellies and tendons. Skiagrams of the limbs show that the bones are of normal transverse diameters, and the only defects observable are a shortness of the diaphyses and a slight exaggeration of the ordinary curves. The shape of the head is peculiar. There is a short basicranial axis associated with a globular vault, great vertical height and prominent forehead, producing, as it has been said, a pouter-pigeon aspect. (This conformation of head has been shown by Thomson and Symington[1] to be a direct result of the early synostosis of the basicranial axis, and the consequent expansion of the growing brain in other directions.) There are no myxœdematous features: the skin is not thickened and is of healthy tint, the thyroid is of normal size, the tongue is normal, there are no supra-clavicular masses of fat, the abdomen is normal, and there is not the least trace of mental hebetude—in fact the man is particularly quick in mental action and bodily movement.

The etiology of achondroplasia is obscure. It was shown by Thomson and Symington that the essential skeletal abnormalities of the disease are of two kinds—premature synostosis of the basicranial axis, and defective endochondral ossification, so that the diaphyses of long bones are shorter than usual.

It was also pointed out by these observers that the only condition to which achondroplasia has any resemblance is sporadic cretinism, in which precisely the same osseous abnormalities are present.

Figs. 6 and 7 of a case of sporadic cretinism, which was under my care a year or two ago, clearly show the similar changes in the shape of the head and in the length of the limbs.

Achondroplasia differs however from sporadic cretinism in that the thyroid body is normal, and in the majority of cases there is an absence of cretinoid features, *e.g.* enlarged tongue, supra-clavicular masses of fat, enlarged abdomen, myxœdematous condition of the skin, defective intellect. Mr. Flemming's case is exceptional in that these cretinoid features were present; indeed, were it not that the thyroid body was normal, one would be fully justified in calling it one of sporadic cretinism.

These facts lead to the following suggestion. It is well known that the thyroid body is originally a gland pouring a secretion into the alimentary canal. This function ceases early in the vertebrate family history and in the individual life-history of the higher vertebrates; and the only trace in adult life of this part played in the past is the foramen cæcum at the base of the tongue and an atrophied duct passing up in front of the hyoid bone, portions of which, persisting, may form troublesome mucus-secreting cysts. But another function is superimposed on the gland, by reason of which it continues in existence and develops—that of producing substances which, passing into the lymphatics and thence into the blood, keep the body in good health, and the failure of which from disease brings about a myxœdematous condition.

Now, in the usual cases of achondroplasia, *e.g.* the man above described, there can be but little doubt that the thyroid body ultimately performs its function of producing an internal secretion. The skeletal changes, however, indicate that probably during early fœtal life this function was absent or deficient. Achondroplasia, then, is possibly due to a retardation in the development of this function. The cases may thus be cretins in early intra-uterine life; and whilst, on the development of the secondary function of the thyroid, the tissue

[1] *Rep. Lab. Roy. Coll. Phys., Edinb.*, 1892, iv. 237.

changes other than the osseous rapidly improve, the latter from their very nature persist and leave indelible traces of the events of the past.

Mr. Flemming suggests that in his case the disease had remained active much longer than usual. This suggestion, it may be remarked, is in harmony with the cretinoid condition of the child, and probably the "internal" secretion of the thyroid had not yet begun to be formed.

FIGS. 6 & 7.

Case of Sporadic Cretinism.

THE BACTERIOLOGY OF SOME SUPPURATIONS COMPLICATING PULMONARY DISEASE.[1]

BY

J. O. SYMES, M.D., D.P.H.,

Bacteriologist to the Bristol Royal Infirmary.

Pneumonia.—The first series of cases to which I wish to draw attention is that in which, together with either lobar or catarrhal pneumonia, there existed one or more foci of suppuration in other parts. I have examined seven such cases. In four of these the lung was apparently the starting point of the infection.

Case 1.—Aged 3 years. Was admitted suffering from lobar pneumonia, during which cerebral symptoms developed. At the necropsy there was well-marked croupous pneumonia and pleurisy, together with suppurative infiltration of the lateral ventricles of the brain, without general meningitis. Friedländer's pneumo-bacillus was isolated from the lung and from the pus on the ependyma.

Case 2.—Aged 21 years. Admitted with broncho-pneumonia, which terminated fatally. The necropsy showed suppurative peritonitis, and pus in the right middle ear, in addition to broncho-pneumonia. The suppurative lesions were not recognised during life. Pneumococci were present in the pus from all three situations.

Case 3.—Aged 6 years. Clinically there were signs of broncho-pneumonia and meningitis, and the *post-mortem* examination showed catarrhal patches in both lungs and pus in both tympanic cavities. There was no meningitis. Pneumococci were detected in the pus from the ears, in the consolidated areas of lung-tissue, and in the spleen.

Case 4.—Admitted with lobar pneumonia of left lung, and died soon after admission. In addition to pleuro-pneumonia, suppurative pericarditis was found at the *post-mortem* examination, and bacteriological examination showed the existence of pneumococci in lung, in pericardium, and in spleen.

These cases, especially those in which the organism was cultivated from the spleen, illustrate the fact that pneumonia is frequently a general infection. Whether it is always so one cannot say with certainty. It is interesting in this connection to note that in severe cases the pneumococcus can not infrequently be demonstrated during life in the blood. Thus Kohn isolated the pneumococcus from the blood in nine out of thirty-two

[1] Read before the Bristol Medico-Chirurgical Society, February 8th, 1899.

cases of pneumonia. Of these nine positive cases seven died, and the other two were complicated respectively by empyema and pneumococcus suppuration. Of the twenty-three negative cases only five died, so that one may conclude that the presence of the pneumococcus in the blood of a patient suffering from pneumonia is to be regarded as a bad prognostic indication.

There is evidently scope for *ante-mortem* as well as *post-mortem* blood examination in cases of pneumococcus infection.

A point of practical importance suggested by the cases just quoted is the necessity for examining the ears in all cases of pneumonia with cerebral symptoms, and if signs of pus be detected of evacuating it by incising the membrana tympani.

The following case might perhaps have been fairly classed with the four preceding:—

A child of 15 years was admitted in a typhoidal state, with delirium, and other well-marked cerebral symptoms. There was no optic neuritis, and Widal's test was negative. Later there were signs of broncho-pneumonia, and death ensued. The *post-mortem* examination showed a general pneumococcus infection, there being broncho-pneumonia, suppurative cerebral and spinal meningitis, and pus in tympanic cavities. The right membrana tympani was perforated. The history showed that when eight years old there had been suppuration of the right middle-ear and perforation of the membrane. The question then arises: Was the right tympanic cavity the starting point of the infection?

In three out of the first four cases in which otitis media existed there seems little doubt but that this was secondary to the lung condition.

Personally, I do not know whether the pneumococcus is found in *chronic* middle-ear discharges; but as it is normally present in the mouth and pharynx, it is not unlikely that it should reach the ear and, exciting a suppuration, be the starting point of a general infection. On the other hand, it is equally possible that the old ear-mischief was again lit up by a pneumococcal infection from the lung. Again, the case may have been one of simple cerebro-spinal meningitis, a disease of which the pneumococcus is frequently the exciting cause.

The danger to life of **middle-ear suppuration**, although no symptoms of mastoid implication can be clinically detected, is well illustrated by the following cases:—

Case 1.—Admitted with membranous stomatitis and tonsillitis. Died of broncho-pneumonia. Bacteriological examination of the

membrane before and after death showed staphylococcus albus and aureus only. Cultures taken at the *post-mortem* examination from consolidated areas of the lung and from pus in the right tympanic cavity showed streptococci. There had been discharge from the right ear for six months previously, and one may assume that this was the exciting cause of the streptococcic pneumonia.

Case 2.—Aged 5 years. Was admitted with discharge from right ear of many months' duration. No mastoid tenderness, but broncho-pneumonia and signs of meningitis. The necropsy showed pus in right tympanic cavity, extra-dural abscess, sinus thrombosis and multiple suppurative centres in the lung, all of which gave rise on culture to abundant growth of streptococcus longus. There was no meningitis.

In acute cases of middle-ear disease with **mastoid implication** calling for operative interference, I have on several occasions found the streptococcus to be either the predominant organism, or to be present in pure culture. It apparently is the most common causative agent, whilst second comes the pneumococcus, staphylococcus being a secondary infection. It would be of great interest to determine whether the streptococcus is constantly present in chronic ear discharges. In the throat the streptococcus appears to be normally present, at times attaining to a high state of virulence, and exciting tonsillitis and stomatitis. It may be that it undergoes similar changes of virulence in the ear, or possibly when introduced from without it finds in the chronically inflamed tympanic cavity a suitable nidus, and excites a suppuration of more than ordinary intensity.

The last case of pneumonia with suppuration which I purpose mentioning occurred in a case of enteric fever.

During life, in addition to the regular symptoms of the disease, there was marked deafness and retraction of the head, together with signs of pneumonic consolidation. At the necropsy the right tympanic cavity was full of pus, there was a septic thrombus in the kidney, and broncho-pneumonia. Bacillus coli was isolated from kidney, ear, and lung. As the necropsy was made thirty-six hours after death, it is doubtful whether this result has any true value. In abdominal diseases, and especially in typhoid fever, the bacillus coli invades the tissues very quickly after death, and so rapidly does it multiply that any other organisms present are apt to be crowded out and disappear. The case, however, serves to illustrate a point which I have verified at other *post-mortem* examinations, viz.,

that this organism is not infrequently the exciting cause of broncho-pneumonia.

Pleural effusions may be divided into three classes: (i.) Mechanical, such as occur in cardiac disease, in some forms of renal disease, and in malignant implication of the pleura. (ii.) Serous effusions of microbic origin. (iii.) Purulent effusions of microbic origin.

The only simple effusion I have examined was taken from a patient suffering from malignant disease of the lung. The fluid was sterile. At the *post-mortem* examination secondary implication of the pleura was discovered. The commonest exciting cause of non-purulent pleural effusion is undoubtedly the tubercle bacillus; fully 75 per cent. of so-called "idiopathic" pleurisies having this origin. Unfortunately it is seldom possible to demonstrate tubercle bacilli by centrifugalisation and film preparations, but if large quantities of the fluid (10 c.c.) be inoculated into guinea pigs positive results will be obtained in a large proportion of cases which would otherwise be styled "rheumatic" or "idiopathic."

Streptococci and pneumococci are also capable of exciting pleurisy, often as a primary disease, and further, if the conditions be such as to permit of the growth of these micro-organisms, the effusion will become purulent.

Tubercular effusions seem less liable to become purulent. Of 109 cases of empyema collected by Netter, twenty-nine were associated with pneumococcus, three with pneumococcus and streptococcus, forty-eight with streptococcus, fifteen fœtid cases with various saprophytic organisms, and only six with the tubercle bacillus.

I have had the opportunity of making a bacteriological examination in seven cases of empyema. In three the pneumococcus only was found, in one the pneumococcus with staphylococci and streptococci, in two staphylococcus (one aureus, one albus), and in one tubercle bacillus and staphylococcus albus.

The pneumococcal cases all followed attacks of pneumonia.

Case 1.—Aged 2 years and 5 months. Had broncho-pneumonia, and subsequent empyema, which was drained. The case terminated fatally, and at the *post-mortem* examination there was found an abscess at the base of the lung on the affected side. The pus from the empyema during life and from the abscess after death showed pneumococci.

Case 2.—Aged 4 years. Said to have had pneumonia one month previously. Pus from empyema showed pure culture of pneumococcus.

Case 3.—Aged 8 years. Lobar pneumonia four weeks previous to operation for empyema. The effusion showed presence of pneumococcus.

Case 4.—Empyema opened six months previously, but still discharging. The pus showed capsulated diplococci, probably pneumococci, also staphylococcus pyogenes aureus.

It is noteworthy that all these pneumococcal cases required operation and drainage. It has been held by some observers that a pneumococcal empyema may frequently be cured by simple aspiration, but this is a point on which there is likely to be much difference of opinion. There can, however, I think, be no doubt that the pneumococcus infection is less dangerous than that due to streptococcus or staphylococcus.

Both the staphylococcus suppurations included in the seven cases were fatal.

Case 1.—Had a history of long-standing pulmonary trouble, dating from an attack of bronchitis thirty years previously. The *post-mortem* examination showed that the left pleura was converted into thick calcified plates, and the contained pus showed staphylococcus pyogenes albus.

Case 2.—Aged 3 months. The empyema was preceded by a broncho-pneumonia. The pus drained off during life showed staphylococcus pyogenes aureus, and the same organism was present in the pus from an abscess cavity in the lung of the affected side, as discovered after death.

It is doubtful whether the following should be classified as a case of empyema :—

Case 5.—Clinically there were signs of fluid at one base, but the exploring needle only brought away thick caseous material, which when examined microscopically was found to contain cocci (which on culture proved to be staphylococcus pyogenes albus) and tubercle bacilli. Such a condition may be regarded as a tubercular pleuritis rather than empyema, but the case serves to raise the question as to whether it is advisable to operate when it is known that the empyema is of tubercular origin.

In conclusion, I may say that the manner in which organisms reach the pleuritic cavity is a matter for conjecture. It would

not seem probable that either pleurisy or empyema can be simple primary affections. In health the air in the lungs must be as a rule free from microbic life, or if organisms be present we should not, judging from analogy, expect them to have the power of penetrating a healthy pleura. On the other hand, in diseased conditions of the lungs the neighbouring pleura will certainly suffer, and through a damaged membrane the organisms may pass out just as does the bacillus coli through an injured gut wall. Probably exposure to cold has this injurious effect upon the pleura and thus predisposes to pneumonia and pleurisy.

Our present knowledge of the lesions excited by the pneumococcus and its general infectivity, point to the unsatisfactory nature of our present methods of treatment and to the need for an efficient curative serum.

In the discussion which followed Dr. MICHELL CLARKE said that in cases of empyema information as to the micro-organism concerned might be got from the examination of coverslip preparations. He had not found in four cases of empyema due to the pneumococcus, that simple aspiration cured the patients. They all required incision later. He mentioned a case in which the diphtheria bacillus was abundantly present in the sputum, and in which there were symmetrically seated patches of consolidation in the apex of the lower lobe. There were no throat symptoms. He also alluded to the cases of disseminated broncho-pneumonia which followed influenza.—Dr. CAVE spoke of the value of the bacteriological examination of the blood and of the cerebro-spinal fluid in infection of the system and of the central nervous system in cases of pneumonia; also of the frequent biological association of staphylococci and tubercle bacilli in pleural effusion, so frequent that the demonstration of the former may justifiably excite suspicion of the essentially tubercular origin of the effusion. He also referred to Debove's demonstration of a substance analogous to tuberculin in tubercular effusions, and of his method of demonstrating its presence by injecting tuberculous guinea-pigs and producing a febrile reaction.—Dr. JAMES SWAIN said that suppurative processes produced by the pneumococcus somewhat resembled similar conditions caused by the tubercle bacillus. It was well known that tubercular abscesses rarely needed drainage, and there were also pneumococcal abscesses which had apparently been cured by evacuation without drainage.—Mr. ROGER WILLIAMS thought it remarkable that the pleural fluid was sterile in the only case associated with pulmonary malignant disease, as malignant tumours of any size nearly always teem with bacteria, etc., especially when in direct communication with the external atmosphere. Moreover secondary tumours also nearly always carry microbes with them, and as in this case there was secondary deposit in the pleura, it would seem that the pleural fluid was very likely to have been exposed to infection.

Progress of the Medical Sciences.

MEDICINE.

At the present time the **treatment and prevention of tuberculosis** occupies considerable attention. To pass under notice in this short review the various points bearing upon the subject brought into prominence during the past few months would possibly not be very profitable. It is well, however, sometimes to use our judgment concerning apparently well-established facts, and to consider whether there may not be sources of error causing what appears to be fact to be mixed with fallacy. The members of the medical profession are the leaders of public thought in these matters, and if we lay down the law dogmatically at one time and a few years later formulate rules of different character, we give good reason for those who look to us for guidance to treat our opinions with scant courtesy.

Much blame has been thrown upon **milk**, by laboratory workers and other observers, as a source of infection of tuberculosis in children. Dr. Delépine[1] prefaces his valuable lecture upon tuberculosis and the milk-supply with some rather strong remarks. He says: "The difficulty of dealing with tuberculosis is further increased by the general ignorance of the public. The danger which they incur from a contaminated milk-supply is appalling in its magnitude, yet because this danger is of an insidious nature and its effects are often so gradual that it is difficult to trace their onset they prefer to have their quietude not disturbed. They are also afraid that their purses might have to be opened. Rather than face such possibilities they prefer to believe the few experts who still hold views which numerous most searching investigations have proved to be wrong."

Dr. Delépine's investigations certainly appear to give cause for alarm. He found that of 143 samples of milk 25 gave rise to tuberculosis in guinea pigs. The experiments of Drs. Kanthack and Sladen[2] are perhaps still more striking. Of 90 guinea pigs, inoculated with milk from the dairies in Cambridge, 23, that is 25.55 per cent., died. Dr. Delépine strengthens his attack upon milk by quoting the Registrar's returns of the causes of death at different ages in London, which assign forms of tuberculosis, other than phthisis, to 1,232 cases under the age of one year; whereas later in life, even for so long a period as that between the ages of five and twenty years, there are only 474 in which death is certified as due to these forms of tuberculosis.

Sir R. Thorne Thorne[3] also lays great stress upon the

[1] *Lancet*, 1898, ii. 733. [2] *Ibid.*, 1899, i. 75. [3] *Ibid.*, 1898, ii. 1289.

Registrar's statistics. He mentions that of recent years the death-rates from most varieties of tuberculosis have greatly diminished, but that "when the death-rates from tabes mesenterica, a form of tuberculosis in which the infection is received into the alimentary canal instead of into the lungs were examined, it was found not only that all the gain attained at other ages had been lost in the case of children and infants, but that in addition to this there had been a very heavy increase in deaths from this cause amongst infants under one year of age." Sir R. Thorne Thorne further states that "this increase had gone hand in hand with a steady increase in the consumption of cow's milk as a food in this country," and that "the danger to man, and especially to the infant population, was one of real gravity, and the loss of child-life due to this disease in milch-cows was appalling."

This is a heavy indictment of milk, and it will be valuable to see what proofs of the truth of the accusation are furnished by the *post-mortem* room. It may be well, however, to pause for a moment to consider peculiarities in the **modes of infection** of children by the tubercle bacillus.

In the adult, as is well known, the apex of the lung is the spot in the body most likely to be first attacked. In the child that is not so. Ordinary phthisical disease of the lung spreading from above downwards is decidedly rare. Infection of the lung is common enough, but the disease enters the lung by a somewhat circuitous course. Tubercle bacilli finding entrance to the lungs are taken up by the lymphatics, and are carried to the bronchial and mediastinal lymph glands. In these glands the disease advances; they enlarge and become caseous, and sooner or later either local invasion of the lung, or general tuberculous infection of the body, usually takes place. Tubercle bacilli finding entrance to the intestines also generally fail to give rise to local lesions. They are first stopped by the mesenteric glands, and finding a suitable soil there may give rise to enlargement and caseation, as in the case of the bronchial glands. Ulcers in the intestines may occur, but when present they are usually of much more recent date than the associated disease of the mesenteric glands.

If the indictment against milk be correct, the *post-mortem* room will furnish us with numerous examples of disease of the mesenteric glands, at the time of life in which children are drinking large quantities of cow's milk. Dr. Sims Woodhead[1] was the first to write upon this subject, and from examination of 127 cases of tuberculosis in children, he found the mesenteric glands caseous in no less than 100 cases. The mediastinal glands were also, however, caseous in 95 cases; but in most of those Dr. Woodhead considered the disease more recent in the thorax than in the abdomen. These statistics taken alone would appear to put the subject beyond the region of dispute.

[1] *Rep. Lab. Roy. Coll. Phys., Edinb.*, 1889, i. 179.

Other observers, however, have not met with the same localisation of tuberculosis of the lymph glands as Dr. Woodhead. Dr. Carr[1] found 79 cases in which tuberculosis in children appeared to start in the thoracic glands, against 20 in the abdominal; and Dr. Colman,[2] after examination of *post-mortem* records at the Children's Hospital, Great Ormond Street, expressed the opinion that, while he did not doubt the possibility of infection of milk in some cases, he was led to attach much more importance to the condition of the thoracic lymphatic glands, as the process was more advanced in them, as a rule, than in the mesenteric glands, and in several they were extensively caseous, when the mesenteric glands showed little or no change.

Dr. Carr and Dr. Colman are not alone in their opinion. Kempner[3] expresses the opinion that tuberculosis, in childhood especially, originates from disease of the bronchial glands. Comby[4] considers that the respiratory tract is always the starting point. In 28 necropsies on children dying of tuberculosis, under the age of two years, the mediastinal glands were affected in every instance. Kossel[5] in 14 necropsies found caseous bronchial glands in 10 cases, and the mesenteric caseous in one; and Weiderhofer[6] found intestinal tuberculosis in only 8 per cent. of cases of tuberculosis in children under the age of two years. But the most striking experience is that of Dr. Emmett Holt.[7] In 119 necropsies upon children dying of tuberculosis, he found caseous bronchial glands in no less than 108, and caseous mesenteric glands in only 38; and in nearly every case of the latter, he considered the abdominal disease had followed the thoracic. He believes that the importance of infection by the intestine has been "greatly exaggerated," and in his opinion does not occur in more than 1 or 2 per cent. of the cases. Dr. Holt quotes Northrup as having had a similar experience to his own. In necropsies on 125 cases of tuberculosis in children, only one case was found in which the disease appeared to have started in the alimentary tract, while in 88 it was clearly through the bronchial lymph glands.

At the Bristol Royal Infirmary the *post-mortem* examinations upon children are not numerous, but those seen during the time I have had charge of the pathological department afford little evidence of primary infection by the alimentary tract. Of ten children of the age of two years and under dying of various forms of tuberculosis, in nine the bronchial and mediastinal glands were caseous. In four of these the mesenteric glands showed a few caseous points, but the disease was much less advanced than in the bronchial glands. In one case, however,

[1] *Lancet*, 1894, i. 1177. [2] *Brit. M. J.*, 1893, ii. 740.
[3] *Münch. med. Abh., j. Reihe*, Heft 17; abstract in *Brit. M. J.*, 1896, ii. Epitome, p. 52.
[4] *Klin. Therap. Woch.*, 1898, v. 604; abstract in *Pediatrics*, 1899, vii. 44.
[5] *Kinder-Arzt.*, 1896, vii. 19; abstract in *Pediatrics*, 1896, ii. 356.
[6] Quoted in *Med. News*, 1896, lxix. 609.
[7] *Med. News*, 1896, lxix. 656.

the mesenteric glands were alone affected; but this was the only case, not only under the age of two years, but at any age, seen in the *post-mortem* room during the past four and a half years, in which infection appeared to have taken place through the alimentary tract.

Another mode of entrance is by the **tonsils**. I have had one well-marked instance of that mode of infection, and some of the statistics quoted above give others; but since the tonsils are open to infection by either the air or milk, examination of such cases has no bearing upon the subject before us.

To return to the question of **infection by the alimentary canal**, the above *post-mortem* statistics must have made it clear that the Registrar's statistics, upon which Dr. Delépine and Sir R. Thorne Thorne laid so much stress, must be, in very great degree, fallacious. The *post-mortem* room shows disease of the mesenteric glands unassociated with tuberculous disease elsewhere to be distinctly rare, consequently tabes mesenterica cannot be of the "appalling" frequency those statistics make it appear to be.

Dr. Carr[1] refers to this point. He says that he has notes of nearly 100 *post-mortem* examinations of cases that clinically might have been called tabes mesenterica, yet in only one of the 100 was any abdominal tuberculosis present. Tuberculosis of the mesenteric glands, however, does exist; but when we find it present, it is not necessary to conclude that the infection was conveyed by milk. In the majority of cases it is secondary to infection of the respiratory tract.

In those cases in which the disease in the mesenteric glands is much less advanced than in the bronchial glands, infection obviously takes place from tubercle bacilli conveyed to the intestines by swallowed infected bronchial secretion. Our experience of early phthisis in adults shows us how the bronchial secretion of bronchitis that precedes local disease may swarm with tubercle bacilli. When tubercle bacilli find their way into the bronchial tubes of children, one can easily understand how, multiplying there and causing increased secretion, the number of bacilli that are absorbed by the lymphatics and enter the bronchial lymph glands must be small, compared with those that, coughed into the mouth in bronchial mucus, are swallowed and finally enter the intestines. There are, however, not only a few cases in which the disease is more advanced in the mesenteric glands than in the bronchial, but occasionally a case occurs in which the mesenteric glands are alone affected. I am not prepared to admit, however, that even these cases are the result of infection derived from cows.

The milk from which babies are fed no doubt frequently stands for the greater part of the day in the dark, ill-ventilated dwellings of the poor, where the dust in many instances contains tubercle bacilli derived from human sufferers from

[1] *Lancet*, 1898, ii. 1662.

tuberculosis. We have seen that it is by air containing such bacilli finding entrance to the lungs that children are generally infected, but we can easily understand how occasionally milk might be so placed as to receive more bacilli than a child's lungs.

There is another way by which children may become infected by the alimentary tract without deriving the disease from cows. The free intercourse of women of the humbler classes, and the attention they pay to one another's babies, introduces an element of risk. The child may be kissed by a phthisical woman, or may have a spoonful of sweetened liquid given to it that has been previously tasted by such a person.

Tuberculous disease in cows may be the same disease as in man, but it does not follow that the tubercle bacilli present in the milk of diseased animals are very virulent towards man. If small-pox in cows assumes a very mild form, in man it might be argued that tuberculosis possibly does also, and that if only a mild attack of tuberculosis protected against the more severe forms of the disease, the best way to protect the younger members of the community would be to feed them on tuberculous cows' milk.

I am not aware, however, that there is yet proof that the tuberculous disease of cows is capable even of communicating a mild form of tuberculosis to man. We cannot, of course, test the power of infected milk on babies, as can be done in guinea-pigs, but Dr. Emmett Holt[1] tells an interesting story that has some bearing upon the point, and may be looked upon as an extensive experiment innocently performed. Near a large American city was a stock farm of Jersey cows, which supplied milk to a large number of the wealthiest families in the city for a period of ten years. At the end of that time, 45 per cent. of the cows were found by the tuberculin test to be tuberculous. They were killed by order of the State Board of Health, and the diagnosis confirmed in every instance by necropsies. Of the many hundreds of children who had taken the milk, in only one could it be found that tuberculosis had developed, and in that case it was not clear that the milk was responsible. The employés about the farm had also been accustomed for several years to drink skimmed milk in large quantities as a beverage in the place of water. Not one, however, developed tuberculosis.

Such a tale does not lend much support to the view of Dr. Delépine, that "the danger from a contaminated milk-supply is appalling in its magnitude." Much as I respect the ability and judgment of the probable author of another statement which appeared recently in one of our local newspapers,[2] I think it rather premature to tell the public that "it is probable the germ of consumption is carried to us most frequently by meat or milk." That milk is a source of danger in many ways none of us doubt.

[1] *Loc. cit.* [2] *Western Daily Press*, Jan. 30, 1899.

When one learns that as many as 60,000 micro-organisms have been found in a cubic centimetre of milk, one cannot lay too great stress upon the importance of sterilisation. But to arrive at the decision that milk is the most important factor in the spread of tuberculosis appears to me to be an error. If we turn our attention, and that of the public, too strongly in some new direction, we are apt to lose sight of other facts already well established.

There can be no two opinions as to the importance of fresh air and sunlight in destroying the vitality of the tubercle bacillus. Careful regulation of the milk-supply may possibly do a little towards diminishing the death-rate from this disease, but more sunshine and ventilation in the dwellings of the poor will do a great deal more.

(In a recent paper[1] Dr. Leonard Guthrie similarly argues against tuberculous milk being a common cause of tuberculosis in children).

THEODORE FISHER.

SURGERY.

Thrombosis and embolism of the mesenteric vessels, as a cause of acute abdominal affections, has hardly received the amount of general attention it deserves, and it may be worth while, therefore, to draw attention to the signs and symptoms it produces.

The usual result of occlusion of the mesenteric vessels is infarction of the intestine. This infarction may follow occlusion of either the arteries or veins, the effect generally being greater when the latter are obstructed, for in that event there is no hindrance to the supply of blood by the artery but there is hindrance to the escape, and of necessity there is produced intense vascular engorgement and often extravasation of blood in the affected area. When the superior or inferior mesenteric artery is blocked, engorgement also follows, the flow of blood producing it in this case being from the anastomosing arteries and from the veins, the backward pressure of the latter coming into play when the *vis a tergo* is cut off. Litten's experimental ligation of the superior mesenteric artery near its origin, in dogs, always produced this result.

Though infarction of the intestine and mesentery, with gangrene in the severest, and ulceration or simple congestion in the mildest, cases, most frequently follows occlusion of the superior mesenteric artery: yet in 2 cases observed by Virchow, and 1 by Tiedemann, that artery was found obliterated without injury to the intestine.[2] Chiene[3] has also reported a case met with in the dissecting-room, in which there was occlusion of the three anterior branches of the abdominal aorta supplying the viscera.

[1] *Lancet*, 1899, i. 286. [2] Quoted by Elliot, *Ann. Surg.*, 1895, xxi. 9.
[3] *J. Anat. & Physiol.*, 1869, iii. 65.

The vitality of the intestine had in no way been impaired, having been maintained by the dilatation of collateral blood-vessels. It appears from these cases that the intestine escapes injury from interference with normal channels of blood-supply if the interference is sufficiently gradually produced to allow of compensatory dilatation of anastomosing arteries.

Councilman[1] remarks upon the probability that small emboli frequently enter the superior mesenteric artery, their entry being favoured by the size of that artery and the angle it forms with the aorta; but that the free anastomosis between its small branches prevents these small emboli impairing intestinal nutrition. He reports 3 cases of embolism of the superior artery which he had met with. One of these is particularly interesting, for clinically the symptoms were those of complete intestinal obstruction, with vomiting finally becoming stercoraceous, great abdominal pain, and tympanites. The patient, who was 85 years of age, died on the twelfth day of illness. The intestine presented a few small ecchymoses, but there was neither intense congestion nor at any place complete infarction. A thrombus attached to an atheromatous patch on the anterior wall of the aorta, just above the origin of the superior mesenteric artery, almost completely occluded the opening of that branch. He thinks it probable that the blood-supply through the obstructed vessel, though sufficient to maintain the vitality of the intestine, interfered with its innervation, leading to paralysis of the bowel and the attendant intestinal obstruction. In a second case, though the entire superior mesenteric artery was obstructed, there was only a beginning of infarction in a small area of the intestine.

Dr. Elliot[2] has analysed the records of 20 carefully reported cases of **occlusion of the superior mesenteric artery,** in which the **abdominal symptoms** were not overshadowed by those of heart disease or by coma. All the cases were rapidly fatal. Pain, often colicky, was the most prominent symptom, and occurred in nearly all. A very notable symptom was the presence of blood in the stools. This was recorded in 13 cases. In 3 the blood was passed without fæces. In 6 the hemorrhage was profuse. In 3 other cases neither fæces nor flatus were passed. Hæmatemesis occurred in 3. Blood is usually found in the intestines at the autopsy, even if not passed during life, and is also frequently found in the peritoneal cavity. In 2 cases there was a palpable swelling, which proved to be infarcted bowel; and in another, a swelling was due to a collection of blood in the mesentery. Subnormal temperature and extreme pallor were noticed in several cases, due no doubt to hemorrhage and peritoneal shock. In nearly half the cases there was diarrhœa. In some there was neither diarrhœa nor other disturbance of the bowels.[3] The source of the embolism is usually

[1] *Boston M. & S. J.*, 1894, cxxx. 410. [2] *Loc. cit.*
[3] F. S. Watson, *Boston M. & S. J.*, 1894, cxxxi. 555.

vegetations on the cardiac valves, or on atheromatous patches in the aorta. Watson, analysing 8 cases of total occlusion of the main trunk of the superior mesenteric artery, finds that in 1 case there was entire absence of abdominal symptoms, and in 2 others they were very slight, though the infarction affected a large part of the intestines. On the other hand, in a case in which only a small portion of the intestine was in a state of infarct, abdominal pain was sudden and violent, and there was profuse bloody diarrhœa. It is obvious, therefore, that from the clinical signs it is impossible to tell the extent or degree of the intestinal lesion.

It will have been noticed that one of the most characteristic symptoms mentioned above was bloody diarrhœa. If there is evidence of embolism in other parts of the body, producing for example gangrene of the feet, or hemiplegia, hæmoptysis and chest pain, or splenic or renal trouble, the diagnosis of the condition we are discussing will be much facilitated; but this evidence is often wanting. Again, the presence of heart disease and atheromatous arteries will help in the diagnosis. Watson thinks it possible to diagnose about one-fourth of the cases. The affection, perhaps, most closely resembles intussusception, as pointed out by Elliot.[1] In both infarction of the intestine and intussusception there is often diarrhœa and intestinal hemorrhage, and pain and vomiting. The hemorrhage is apt to be more profuse in the embolic affection, but has been recorded as the principal cause of death in both. In intussusception tympanites is rare in the early stages. In that affection too the patients are usually younger. According to Fitz, 56 per cent. of the cases of intussusception are under the age of 10. The characters of a tumour if present would be an important guide to the diagnosis. A few cases are recorded of embolism of the inferior mesenteric artery, but the symptoms do not sufficiently differ from those in which the superior artery is affected to permit of clinical differentiation. It has been said that the presence of fresh blood in the dejections, and the localisation of the pain in the lower part of the abdomen, point to embolism of the inferior vessel.[2]

Elliot[3] has found 14 reported cases of **thrombosis of the superior mesenteric vein.** They were even more rapidly fatal than those of embolism of the artery, nearly all having died on the second or third day with symptoms of intestinal obstruction. The symptoms of this affection are much the same as those of embolism of the corresponding artery, with the exception that diarrhœa has not been recorded as present in any. Blood was vomited or passed in large quantity by the bowel in half the cases. In 5 of the cases there was cirrhosis of the liver, and 2 were syphilitic. In 2 cases a volvulus was considered to be the result of the thrombosis.

It may, therefore, be said that acute abdominal symptoms,

[1] *Loc. cit.* [2] Elliot, *Loc. cit.* [3] *Loc. cit.*

associated with the passage of blood and with portal obstruction from cirrhosis of the liver or other cause, would suggest the diagnosis of thrombosis of the mesenteric veins.

The **prognosis** in these affections of the mesenteric vessels is very bad, though, as mentioned above, there are records which show that patients have survived.

Elliot has only found in literature 3 cases which have been operated upon. He reports 2 additional cases of his own. In none was the diagnosis previously made; and 4 out of the 5 died unrelieved.

Laparotomy, and resection of the intestine if it be found to to require it, is the only **treatment** that offers any prospect of success. Watson states that the records of a number of autopsies showed that one-sixth of the cases might have been relieved by such treatment. In the single successful operation for this condition on record, that of Elliot,[1] four feet of intestine, almost gangrenous from infarction, were removed. The open ends of the intestine were sutured to the abdominal wound, and the artificial anus thus produced was subsequently closed by a second operation. The patient was a male, aged 25, and the cause of the infarction was thrombosis of the mesenteric veins. Elliot's second case was one of thrombosis of a branch of the mesenteric artery. An artificial anus was made in the descending colon; but the patient died. At the autopsy four inches of the intestine were found gangrenous and to have been perforated. In most cases the presence of heart disease, atheroma, or cirrhosis of the liver, militates strongly against surgical success.

* * * *

In all cases of **rupture of the kidney**, whether open or subcutaneous, when first seen the question of the advisability of exploring or of performing a primary nephrectomy will arise. Morris[2] and Keen[3] have each written papers, in which this matter is helpfully considered. They are agreed that the symptom of hæmaturia rarely affords help in deciding the question, for it is a very unreliable guide as to the severity of the renal injury. Hæmaturia may be considerable in degree when the renal injury is slight, and slight or absent when the injury is most severe. If, however, hæmaturia is exhausting the patient by its severity, and especially if bloodclots with their attendant septic dangers accumulate in the bladder, then and then only does this symptom afford clear indications that the kidney should be explored. The clots in the bladder must be removed, either by expression (Willard) if laparotomy is performed, otherwise by the aid of a catheter or evacuator, and their further formation must be prevented, either by ligature of the bleeding-points in the kidney or plugging the wound in it, or by nephrectomy. Again, primary anuria does not afford an indication for operation unless it persists for twenty-four or thirty-six hours after shock has passed off, or unless it appears after the lapse of

[1] *Loc. cit.* [2] *Clin. J.*, 1894, iv. 217. [3] *Ann. Surg.*, 1896, xxiv. 138.

some days. In these exceptional circumstances anuria indicates the advisability of exploration, for it may be due to a ureteral clot preventing the escape of the secretion of the only functionally active kidney present, the other kidney being either absent or diseased. Life in such cases can only be saved by providing an escape for the urine through the loin.

By what **symptoms** or signs then are we to be guided in the majority of cases, in deciding whether to operate or not in these cases of subcutaneous rupture of the kidney? It is "the presence or absence of a distinct and increasing swelling in the loin" which affords the surest guide. As Morris puts it:—"The presence of a distinct and increasing swelling in the renal region makes an early incision through the loin imperative: it is the only way to cut short the progress of the case, to limit the extravasation into the peri-renal tissues, to check or prevent suppuration, to prevent sloughing of the peritoneum, and to save the life of the patient." Having exposed the kidney, it will have to be either removed at once, or dealt with as described above, the degree of injury affording the correct indications.

If in the first instance palliative and non-operative treatment has been adopted, and the case does not progress favourably, and it is obvious that a large hæmatoma has gradually formed, then a secondary exploratory operation, with or without secondary nephrectomy, must be performed. Secondary nephrectomy becomes much more dangerous if postponed until septic complications have arisen. The exploratory lumbar incision should be made to anticipate or prevent septic complications if possible. A good instance of a successful secondary nephrectomy performed on the above principles is one published by Moynihan,[1] in which the operation was done on the twelfth day after an injury which had torn the kidney from the cortex to the pelvis, almost completely dividing it into two parts. There were no septic complications. Page[2] reports another case of secondary nephrectomy which, though ultimately successful, illustrates the disadvantage of postponing these operations until septic complications have arisen. The patient passed through a long and critical illness, and some months after convalescence there was still slight pyuria, suggesting the possibility of infective processes continuing in the other kidney.

J. Lacy Firth.

OPHTHALMOLOGY.

The use of a small electro-magnet in extracting **foreign bodies** which have penetrated the eyeball has been resorted to for more than twenty years. In 1892 Haab, acting upon the principle that "He that has the strongest magnet will obtain the best results," invented a larger and immensely more powerful instru-

[1] *Quarterly M. J.*, 1897–98, vi. 246. [2] *Clin. J.*, 1896–97, ix. 65.

ment, which he has since further improved upon. It is now some twenty-five times as powerful as the ordinary hand electro-magnet, and weighs considerably over a hundredweight. It is pivoted on an accurately constructed stand, and is most conveniently worked with the street current. Numerous cases of its success are on record. R. Barkan[1] relates four cases in which he has used it. In one case the chip of steel had entered the corneal margin and was lodged in the vitreous, but not visible. On the eighth day after the injury the patient's eye was approached to the instrument, and the foreign body gradually came forward into the lips of the wound, so that it could be easily extracted with forceps. The lens was not injured, and in fourteen days the vision was almost perfect. He is so convinced of its utility, that he asserts that no eye clinic should be without one.

In conjunction with this advance it is important to realise the progress made in the use of the **X Rays**, more especially by Mackenzie Davidson. He has devised a very simple and ingenious apparatus especially for eye work. The Crookes tube is fixed in a slide, and after the first skiagram is taken, it is moved a certain distance along the slide before the second plate is exposed. He draws special attention to the advantage of having a tube in which the rays emanate from a very small focus, and he recommends that the terminal should be of osmium. With such an apparatus two minutes is a sufficient exposure for each plate, and it should always be possible to estimate the exact position of any piece of metal not smaller than a pin's head.

The cost of eye injuries has not been sufficiently recognised. The nation, to say nothing of clubs and benefit societies, is put to great unnecessary expense owing to the indifference, we might almost say the aversion, with which workmen regard **protective glasses**. In Cologne the "Quarry-Union" has taken the matter up. Dr. Hillemanns[2] finds there are defects in all the protective spectacles in use, whether of glass, quartz, mica, or gauze. They are either uncomfortable or, owing to obstructing vision, reduce a man's wage-earning power when doing piecework. He recommends goggles, consisting of a short truncated cone of open-meshed galvanized-iron gauze, the base of which fits the face accurately, whilst the summit is closed in by a disc or lens of glass or, better, rock crystal. Since the introduction of these protectors at the railway works at Cologne, five years ago, no eyes have been lost, and the men wear them willingly. Hillemanns urges the profession to direct the attention of the laity to the advantages of proper protectors.

* * * *

There is not much new to record in the technique of **cataract extraction**; in fact, some of the later departures are really reversions to methods abandoned thirty or forty years ago.

[1] *Arch. Ophth.*, 1898, xxvii. 37. [2] *Ibid.*, 527.

This is mainly due to the introduction of cocaine and antiseptics rendering methods safe and practicable which were formerly often attended with failure. Prof. C. Schweigger[1] advocates extraction of the lens by means of a downward corneal flap—practically the old flap operation of one hundred years ago. This method possesses hardly any advantage, except that the corneal wound is more easily inspected after the operation. But this is rarely necessary after all. Various surgeons have attempted to suture the corneal wound; but this procedure does not seem to ensure any better results. The most that can be said of it is that it is not so risky as would at first sight appear probable. Secondary operations (needling opaque lens capsule) are not to be lightly undertaken. Schweigger found that in no less than 15 per cent. of his cases, this operation was followed by disagreeable and tedious irritation, lasting weeks or months. This occurred even in cases where there was no traction on the ciliary body during the needling. For the last two years he has used a modification of de Wecker's forceps-scissors, and clipped through the membrane in every case of capsular cataract, and has met with good results.

* * * *

Tho etiology of **pterygium** is still a matter of dispute. Fuchs regards it as intimately connected with pinguecual; others regard them as two entirely distinct conditions. Henry Lopez,[2] of Havana, has had unusual opportunities for studying the two diseases. He estimates that more than half the male population of Cuba suffer from pterygium—we presume he refers only to male adults, because in the next paragraph he says it is very rarely found before the twentieth year. He is convinced that pterygium and pinguecula are but different stages of the same disease. According to him pinguecula grows up to the corneal margin and forms a sharply defined raised lump; foreign bodies lodge in the angle between this lump and the cornea, destroy the corneal epithelium, and render the cornea a prey to the advancing growth. He does not look upon pterygium as being particularly obstinate or necessitating the complicated operations some have devised. Avulsion of the "head" from the cornea, excision of the whole growth, and suture of the gap in the conjunctiva are effective in almost every case.

* * * *

In a very suggestive paper on "**Ophthalmoscopic evidence of general arterial disease,**"[3] Marcus Gunn draws special attention to the "influence of the arterial pressure on the venous blood-stream where the artery and vein cross one another." The appearances that he alludes to are easy to see, now that attention has been drawn to the subject. At first the vein is bent, and consequently loses its central "light-streak" for a short distance on either side of the artery. Later, the venous current

[1] *Arch. Ophth.*, 1898, xxvii. 255.

[2] *Ibid.*, 279.

[3] *Tr. Ophth. Soc. U. Kingdom*, 1898, xviii. 356.

is markedly impeded and the peripheral portion of the vein is abnormally engorged. His explanation is, that the coats of the artery have undergone a hyaline-fibroid change, the vessel is unduly rigid and tightly distended. He adds: "The result of the increased difficulty in arterial circulation will be to diminish the rapidity of the blood-stream in the capillaries and veins. As a result, there will be a tendency to the escape of *liquor sanguinis* into the surrounding tissues, and this tendency will be much increased where the venous circulation is mechanically impeded, as by an overlying artery." Thus a vicious circle is established, and we get hemorrhages and white patches in the retina. "In the most advanced cases the lines of the folds which radiate from the fovea centralis, due to the œdema, are sometimes eventually marked out by the deposit of white spots of degenerated effusion, so that we get the ophthalmoscopic appearances diagnostic of so-called albuminuric or renal retinitis." Old age does not produce these conditions, and, associated with local disease at any rate, the same appearances may be present in patients of eighteen or twenty.

It would seem that it is not improbable that the formation of this vicious circle may be a factor in some cases of so-called **retinitis proliferans**, but various diseases have been described under this term, and a very different sequence of events is probable in the series of cases mentioned by J. E. Weeks.[1] In twenty-one out of twenty-two cases that he examined after death the retinitis proliferans was due to a fibrinous exudation or hemorrhage into the vitreous, upon which vascular connective tissue creeps up from the retina, thus forming an ophthalmoscopic picture resembling the class of retinitis proliferans first alluded to.

* * * *

In the *Transactions of the Ophthalmological Society* for last year there is a very elaborate report on the question of **excision of the eyeball** and allied operations, from which I extract the following. Removal of a portion of the eye (abscission) is as old as Celsus, but the first recorded case of "extirpation" was performed in 1583 by means of a spoon with cutting edges, and until 1840 a somewhat similar instrument was invariably used. In 1850 the late Augustin Prichard[2] was the first to extirpate an injured blind eye, and he then advocated excision of the exciting eye in all cases of sympathetic ophthalmitis. Evisceration, as practised by von Graefe in 1863 in cases of suppurative panophthalmitis, has not been shown to have any advantages over excision. The relative frequency of sympathetic inflammation, after the introduction of a globe of silver or glass into the emptied sclerotic (Mules's operation) is infinitely greater than after simple excision. It should only be resorted to in such cases as painful blind glaucomatous eyes, or within fourteen days of an injury in a young subject. The only

[1] *Tr. Am. Ophth. Soc.*, 1897, viii. 158. [2] *Prov. M. & S J.*, 1851, 66.

important objection to the introduction of a similar globe into Tenon's capsule is that it comes out in about a quarter of the cases, and always necessitates for the patient a longer duration in hospital—roughly, twelve days, instead of three days as in excision. Optico-ciliary neurectomy, excision of a portion of the optic and ciliary nerves through an incision over the internal rectus, is only admissible in such cases as painful blind glaucomatous eyes. It has never been known to be followed by sympathetic inflammation except in eyes which had previously been injured in a way likely to cause sympathetic ophthalmitis. It obviates the necessity of an artificial eye; but, unfortunately, the pain for which the operation was undertaken sometimes returns, and in several instances ulceration of the cornea has followed.

* * * *

For **Ophthalmia neonatorum** Prof. Credé, in 1882, advocated as a routine treatment the instillation of a few drops of a 2 per cent. solution of nitrate of silver into the eyes as soon as the child's head was born. Lucien Howe[1] summarises the results of this treatment. The combined experience of a number of obstetricians shows that in a series of more than 40,000 cases ophthalmia neonatorum was fifteen times more prevalent where no treatment was used than when the Credé method was adopted. Solutions of corrosive sublimate, especially the stronger solutions, gave slightly better results; but they cause such excessive inflammation in infants, that the advantage is on the whole in favour of nitrate of silver. He thinks that the Credé method should be made compulsory in all public institutions. Inquiries at 110 of the largest German clinics resulted in the discovery of only four cases in which the method was supposed to have done harm, and in some of these it was doubtful if the nitrate of silver was to blame. Protargol, a protein compound containing 8.3 per cent. of silver, is recommended by Adolf Alt[2] as a substitute for nitrate of silver. It is readily soluble in hot or cold water, and not precipitated by albumin or chloride of sodium. It consequently penetrates much more readily into all the crevices of the conjunctival sac than silver nitrate solution, and its application is much less painful. He uses a 1 per cent. solution, but others have found a 5 per cent. solution more effectual. Largin is another somewhat similar compound which has recently been introduced. Mr. H. G. Parker, the house-surgeon at the Bristol Eye Hospital has obtained good results with a 5 per cent. solution, and judging by the results of a few cases its use can be recommended in all cases of conjunctivitis attended with purulent discharge.

CYRIL H. WALKER.

[1] *Tr. Am. Ophth. Soc.*, 1897, viii. 52; *Am. J. Ophth.*, 1898, xv. 80.
[2] *Am. J. Ophth.*, 1898, xv. 22.

Reviews of Books.

An Epitome of the History of Medicine. By ROSWELL PARK, M.D. Pp. xiv., 348. Philadelphia: The F. A. Davis Company. 1897.

It is with very great pleasure that we have read Dr. Roswell Park's praiseworthy book. We congratulate the University of Buffalo on having authorised the delivery of the course of lectures upon which this work was founded, and upon having a Professor who, in addition to the work of his own special department, was capable of undertaking so serious an additional responsibility. A succinct, but fairly complete, history of medicine from the earliest times to the present day has been compiled by the author, special chapters being devoted to the history of the development of antiseptic surgery, American medicine, anæsthesia, and dentistry. The book gives proof of much investigation and study on the author's part, and is written in good nervous English: the author however is obviously more conversant with the history of modern than of ancient medicine, and the hypercritical critic may succeed in discovering an occasional slip; *e.g.* (p. 34) "Aretæus, who died about 170 B.C., was one of the most brilliant lights of antiquity previous to the Christian era. . . . He came from Cappadocia about the end of the reign of Nero, and lived in Alexandria." It is still a reproach to the Anglo-Saxon nations that so little attention has been paid among them to the history of the medical art, and a really adequate work on the subject does not exist in their language. The author has with much industry done something to remove that reproach, and for his accomplishment we congratulate and thank him.

Inspector-General Sir James Ranald Martin, C.B., F.R.S. By Surgeon-General Sir JOSEPH FAYRER, Bart., M.D., F.R.S. Pp. xvi., 203. London: A. D. Innes & Co. 1897.

This memoir of Sir Ranald Martin, written by a man so well known and appreciated as Sir Joseph Fayrer, is a guarantee for a truthful account of the life of one who was distinguished not only in the position he held in India as a Medical Officer of the Indian Army, but also for his long and honourable career in civil practice both in India and in London, for the admirable work he did as Physician to the Medical Board at the India Office, and also for the excellent literary works on tropical diseases and climates which he has left behind him.

Sir Ranald Martin, like many other distinguished public

servants, hailed from the west coast of Scotland, from the Island of Skye, which is as celebrated for its loyal and patriotic sons as for its gallant and brave though humble breed of wiry terriers.

He came of an ancient and honourable lineage, and, as Sir Joseph Fayrer observes, he not only well maintained the tradition of the stock from which he sprang, but he transmitted his inherited good qualities to a numerous family of sons, some of whom served with distinction in the army and in the Civil Service of India.

Ranald Martin was originally intended for the combative ranks of the army. After he had been educated at the Inverness Royal Academy, a commission was ready for his acceptance in the 42nd Highlanders, the renowned Black Watch. But another career seemed to his father to offer him better prospects. The parental resources were at that time but slender, and the prospect of having to purchase all his steps seemed to his father more than those resources would bear. Young Ranald therefore acquiesced in his father's advice, and although the disappointment was bitter he chose medicine as his future career. He began to study first as an apprentice to a practitioner in Inverness, and in 1813 went to London and entered as a student in St. George's Hospital under Sir Everard Home and Sir Benjamin Brodie; and he also had the great advantage at Windmill Street Medical School of listening to such teachers as Wilson, Charles Bell, and J. Shaw. The period of student life was then very short, for after spending a year at St. George's he passed the College of Surgeons in 1814, which qualified him to practise at the age of 18 years and five months. Guthrie, who became a great surgeon both in military and civil life, passed the College at the age of 16. Truly these men only began to learn their profession *after* they were qualified. They were simply placed on the rails, they did the rest by their own earnest exertions. Two years later, Ranald Martin, having obtained an appointment as Assistant-Surgeon in the East India Company's service, sailed for Calcutta. Immediately on his arrival he was ordered for duty at the Presidency General Hospital for Europeans. The experience he gained in this hospital laid the foundation of his reputation as an earnest worker and close observer of the diseases of tropical climates, a field fresh and unknown to the European physician.

Having been appointed Assistant-Garrison-Surgeon, he was soon after ordered to accompany a force sent to subdue a revolt in Cuttack, in the district of Orissa. Returning to Calcutta, he was ordered to join the Ramghur Battalion for service in the Gondwana campaign. This was at that time a most unhealthy part of India. Here he suffered from a severe attack of malarial fever; but though unable to walk, he had himself carried about in order to make sanitary inspection, and shortly after he forwarded a report to the commanding officer, advising a move of the troops to a higher and healthier situation. This advice was

politely declined, as many others of a similar kind were declined in those days, which resulted, as they usually did, in a higher rate of mortality among the troops. Thus, very early in his military career, did Ranald Martin show that he regarded the prevention of disease as one of the greatest, if not the very greatest, of the duties devolving upon a medical officer in charge of troops.

After only ten years' service in India we find this energetic medical officer, although at the time much broken in health, occupying in the great city of Calcutta a position which augured well for his future success.

In 1830 he was made Presidency Surgeon, and soon after was appointed on the staff of the Native Hospital of Calcutta. It was in this institution that he made his great reputation, not only in medical but in surgical cases: here he devised and first performed the operation for the radical cure of hydrocele by injection of tincture of iodine. In short, after his retirement from army service he became a great general practitioner in Calcutta, and attained the largest practice in the city.

But, on looking at his whole career in India and during his residence in London, it is manifest that the two subjects which were nearest to his heart were his devotion to the interests of the service which he had at first entered, and to the great questions of sanitary science which are so important in preserving the health of armies and communities. When we reflect that when Ranald Martin went to India first the death-rate among Europeans in that country was over 60 per 1000 per annum, and that now, chiefly owing to the work of sanitary reformers, of which Martin was one of the pioneers, the mortality has been reduced to about 18 per 1000, blind indeed must be the chronicler of the latter period of the history of India who does not recognise the blessing which has accrued to native and European alike from the improved health of the army and civil population. The change, too, has been brought about in the face of obstinate prejudices as difficult to overcome in the days that are past among educated European officials, as they are at present among the poor and ignorant natives of Bombay and Calcutta, resisting our attempts to remove from their midst a preventible disease which is decimating their families.

As the climate had begun to tell on his constitution, in 1840 Ranald Martin retired from practice in Calcutta and returned to England, after a service of twenty-five years. His reputation followed him to London, where he took a house in Grosvenor Street, with the intention to practise. He met with the greatest encouragement from Sir Benjamin Brodie, from Guthrie, the President of the Royal College of Surgeons, and others. His success was assured from the first, and he soon attained to a large practice, which he carried on until his sudden death in 1874. In 1859 he was appointed Physician to the India Board in succession to Dr. Scott. This brought him into a more prominent official position, and increased his practice.

About this time also the project of establishing an Army Medical School was taken up by Mr. Sydney Herbert, then Secretary of State for War, and Martin was invited by that minister to become a member of the Senate of the School, which was opened at Fort Pitt, Chatham, in the presence of the War Minister, by the late Sir Thomas Longmore, C.B. In recognition of his great services, Martin was made the recipient of several honours. He received the honour of knighthood, and the Companionship of the Order of the Bath.

"As a practitioner," says Sir John Kaye, "he was one of the most popular that ever entered a sick-chamber. His presence was like a gleam of sunshine, and he seldom quitted a patient without leaving him happier than before." He retired from the active work of his profession in November, 1874, and a few days after he was seized with bronchitis, and passed away after a short illness.

Recollections of Thirty-nine Years in the Army. By Sir CHARLES ALEXANDER GORDON, K.C.B. Pp. viii., 320. London: Swan Sonnenschein & Co., Limd. 1898.

This is a record of the services of a distinguished Army Medical Officer, extending uninterruptedly from the year 1841 to 1880. It is a plain statement of facts, without any adornment of style or any attempt at sensational writing. Surgeon-General Gordon has done long and faithful service to his country, and the five medals on his breast shown in his photograph in the frontispiece of his book attest that they were won in many an arduous campaign, and through many dangers from battle besides the risks run in some of the most deadly climates in which British soldiers are called upon to serve.

Sir Charles has purposely avoided all reference to medical or surgical matters in his narrative, although no man is more capable of dealing with them in a masterly manner.

A glance at the page of contents of the book will show the reader what stirring events he has witnessed. Beginning as Assistant-Surgeon of that gallant corps the 3rd Buffs, in 1841, he joined his regiment in India, serving in the Gwalior campaign in 1843. Returning home in 1845, he volunteered for service on the West Coast of Africa, which at that time held out to young medical officers the prospects of early promotion if they survived the risks of the climate. His service there resulted in some damage to his health; but he was back in India in 1852, but only for a short service, as he was compelled to return home again on sick leave. In the bracing air of his native land he soon recovered, and again went to India to find the great Sepoy Mutiny in full force in 1857. Through a great part of the outbreak he served principally with the Jounpore Field Force. He was present at the capture of Lucknow, and returned to England in 1859. While serving at home in 1860 he

was suddenly ordered to embark for China, where he served in the stirring events at Tientsin and the Taku Forts, meeting, among others, with General Gordon, of Khartoum celebrity, then a Captain in the Royal Engineers. After a short service at home he returned to India for the fourth time.

In the Franco-German War of 1870 Gordon was appointed Medical Commissioner attached to the French Army, his duties being to report to the War Office on certain specified points relating to military organisation in the field. He remained in Paris during the whole period of the memorable siege, and to the end of the war. His descriptions of the scenes he witnessed are most thrilling.

Subsequently he was again ordered to the East. This time to Burma, and afterwards to the Madras Presidency of India.

It will be seen that in the long service of this most energetic army medical officer he enjoyed very little comparatively of the pleasure of home service, and it is gratifying to know that after so much exposure to the dangers of malaria and to many other risks he returned home in fairly good health. In 1880 his honourable service in the army came to an end, and having received the reward for distinguished military service, he retired as a Surgeon-Major-General; and in the Queen's Jubilee year he received from his sovereign the distinction of K.C.B., which he had so faithfully earned.

We heartily commend this book as very pleasant reading.

Tablets of Anatomy. By THOMAS COOKE, M.D., and F. G. HAMILTON COOKE. Three parts. [Eleventh Edition.] London: Longmans, Green, and Co. 1898.

These "tablets" are so well known as regards their arrangement and utility that we need not reiterate the many words of praise that have already been bestowed upon them. In Parts I. and II. the newer matter has been interpolated rather than incorporated, and this has led to a somewhat clumsy arrangement of the numbering of the pages and to some unnecessary repetition, which we think might profitably be altered when another edition is provided.

Since the above was written we regret to learn of the death of Mr. Thomas Cooke. While at work in his dissecting room he was seized with an attack of angina pectoris which ended fatally before he could be removed.

The Essentials of Experimental Physiology. By T. G. BRODIE, M.D. Pp. xiv., 231. London: Longmans, Green, and Co. 1898.

For some time past we have had most excellent guides for laboratory work in histology and chemical physiology, by Schäfer and Halliburton respectively. Dr. Brodie's is the much

wished for companion volume, and will, we think, have the same success. It is written on lines similar to the others—containing a clear account of the main experiments which should be done in such a course, and of the deductions which may be drawn from them. It is admirably done, and will, we hope, be much used.

Hallucinations and Illusions. By EDMUND PARISH. Pp. xiv., 390. London: Walter Scott, Ltd. 1897.

This book, which is one of the "Contemporary Science Series," is an English edition of the German original, which grew out of an examination of the "International Census of Waking Hallucinations of the Sane," and forms, in the words of its sub-title, "A Study of the Fallacies of Perception" of great interest.

Psychology is still a very young science, and it is only within the last few years that it has taken its place as an accurate—and to a great extent experimental—study of facts. There is already an extensive literature on the subject, and Mr. Parish is evidently well acquainted with it. In fact, the work is the outcome of a great deal of research and careful reasoning. Dreams, hypnosis, fallacies of memory, association and dissociation, after-images, &c., are each dealt with in relation to hallucinations and illusions. From the evidence collected there can be no doubt of the comparative frequency of hallucinations amongst the healthy in a waking condition, and it is stated that it is "impossible in practice as in theory to distinguish between waking hallucinations and those of sleep." Physiology is naturally constantly referred to and modern theories of brain-function are clearly understood; but there are, here and there, allusions to the "subcortical centres" and "basal ganglia," which are perhaps not quite up to date in the *rôle* allotted to these parts.

A powerful case is made out against instances meant to prove telepathy or thought-transference, and this part of the book is of most interest to the general reader, because it is less technical and requires less previous knowledge of the subject.

There is a useful summary in the last chapter, and an appendix with carefully-prepared tables and illustrative cases at the end of the book.

The questions discussed in this "Study" are intricate and abstruse, and great praise must be given to the author for the pains he has taken to sift a large mass of evidence and bring his deductions clearly before the reader.

The Blood: How to Examine and Diagnose its Diseases. By ALFRED C. COLES, M.D. Pp. xii., 260. London: J. & A. Churchill. 1898.

The scope of this book is limited to the examination and staining of the formed elements of the blood. The practical directions for the preparation and staining of blood-films are

full and clear enough to enable anyone who carefully follows them to procure good specimens. Dr. Coles advocates the use of hæmatoxylin and eosin as stains, and the plates show that in his hands this method has given good results. We agree that the method of staining with eosin and methylene blue is difficult to carry out, and somewhat uncertain in its results. The author also advises alcohol and ether instead of heat for fixing blood-films. Sections on the pathology of the diseases described are given, but are too short to allow of an adequate treatment of the subject. Generally speaking, the references to the literature are full, and the opinions of other writers given at length. We think that the author might have given his own views more decidedly, and in some cases he has left his statements too vague for a text-book, but this well-printed volume, taken as a whole, gives a satisfactory account of the subject, and will no doubt be found useful for aid in work and for reference. The plates are well executed in colours. An illustration of the Thoma-Zeiss hæmacytometer would render the description more complete.

A System of Medicine. By many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.D., F.R.S. Vol. V. Pp. xii., 1058. London: Macmillan and Co. Limited. 1898.

An exhaustive account of the diseases of the respiratory organs and of the circulatory system fills up this volume. It is somewhat belated, having waited for Professor Welch's contribution on thrombosis and embolism, which after all did not arrive in time; nevertheless, it well maintains the standard of the four previous volumes.

Dr. William Ewart writes the articles on bronchitis and bronchiectasis, in which many new methods of treatment are described; the most noteworthy of these is the creasote method of Dr. Arnold Chaplin, whose object is to bring about a complete expectoration of the bronchial contents, the vapour inhaled being concentrated to an almost intolerable degree. Whilst the cavities are being cleared and disinfected collateral expansion of the lung is induced by the cough, and the gradual contraction of the sacculations is promoted. This inhalation method has given such brilliant results, that every sufferer should have the benefit of a trial. Treatment by intra-tracheal injection of menthol and guaiacol in olive oil has given good results in inveterate cases of fœtid bronchiectasis, but Dr. Ewart gives a caution as to its use in phthisis. Amongst other methods of treatment are mentioned "(*a*) The inhalation of an oxygenated and terebinthinated atmosphere; (*b*) systematic exercise, at first passive only, of the thoracic muscles and of the abdominal muscles, including the use of dumb-bells or clubs, and a variety of postural exercises; (*c*) systematic respiratory gymnastics, such as deep inspirations followed by deep expirations in various

attitudes, reading aloud or singing; (*d*) general massage and passive resistance movements followed by brisk rubbing." It will be seen that Dr. Ewart's article is very complete in its scope, and gives much more encouragement to the chronic bronchial invalid than he commonly receives.

Dr. Pye-Smith's article on pneumonia, and Dr. Percy Kidd's on phthisis pulmonalis, give excellent summaries of what is established with regard to those diseases and their varieties. The former does not lead us to expect a great diminution in the present high mortality of pneumonia, for he remarks that "in the long run the expectant method of treatment, which interferes only as occasion requires, is followed by a far lower mortality than misplaced attempts to 'jugulate' the disease, or than a completely negative treatment." We can scarcely reconcile this statement with the results given by Petresco, whose name, spelt with a final u, does not yet appear to be as well known as his statistics deserve to be, inasmuch as he reports a mortality of 2 per cent. in contrast with the 25.5 per cent. from Guy's Hospital as given by the author in this volume.

A short chapter by Dr. H. D. Rolleston describes a comparatively little known variety of the pneumomycosis of Hughes Bennett, which bears the name "pulmonary aspergillosis," in which the destructive lesions in the lungs are due to their invasion by a fungus, the aspergillus fumigatus. In order to differentiate this malady from other forms of pseudo-tuberculosis it is necessary that cultures should be obtained; without these no opinion as to the identity of the form of aspergillus is valid. The clinical features may resemble either those of chronic pulmonary tuberculosis or those of emphysema, and a secondary infection with tubercle bacilli is not improbable. The prognosis is less grave than that of pulmonary tuberculosis, since the lesion is usually much slower, never sets up a general infection, and tends to undergo a gradual and spontaneous cure.

Dr. Kingston Fowler writes on emphysema and on syphilitic disease of the lungs, and Dr. James F. Goodhart on asthma and hay fever. The account of the diseases of the respiratory organs concludes with articles on intra-pleural tension, on pleurisy and pneumothorax, by Drs. Samuel West, Gee, Herringham, and Finlay.

Amongst the chapters on diseases of the circulatory system, that by the editor on the ubiquitous but little understood chlorosis is one of the most interesting; and other articles by the same author are on functional disorders and mechanical strain of the heart. He makes the remark that "the physician who cannot treat chlorosis successfully with iron should abandon the practice of medicine"; and he has often suspected that incurable chlorosis may mean insoluble pills. He believes that in the sound adult organism the effects of physical stress upon the heart are promptly counteracted by equilibrating machinery, and that the importance of muscular effort as a factor in cardiac disease has been much exaggerated.

A System of Practical Medicine by American Authors. Edited by ALFRED LEE LOOMIS, M.D., and WILLIAM GILMAN THOMPSON, M.D. Vol. III.—*Diseases of the Alimentary Canal—Diseases of the Peritoneum—Diseases of the Liver and Gall Bladder—Diseases of the Spleen—Diseases of the Pancreas—Diseases of the Thyroid Gland—Chronic Metal-Poisoning—Alcoholism; Morphinism, etc.* Pp. 5—9, 19—926. London: Henry Kimpton. 1898.

The list of contributors to this volume comprises nine physicians of New York State, three of Canada, one of Boston, two of Ann Arbor, one of Chicago, one of San Francisco, one of Washington, and one of Philadelphia; a list which may be looked upon as fairly representative of the North American continent.

Dr. Stockton and Dr. Allen Jones, in their article on diseases of the stomach, give an account of what can be done which is much in advance of the ordinary text-books. Their account of the general examination of the patient and the physical examination of the stomach comprises the use of all modern methods, and their account of the general and chemical analysis of the stomach-contents is especially full and complete. The subjects of hyperchlorhydria, hypochlorhydria, and achylia gastrica are described fully, and the use of the gastric electrode is advocated, both for the correction of defective secretion and in the treatment of the gastric sensory and motor neuroses. In the treatment of gastric ulcer the authors advocate the use of a combination of cerium oxalate, bismuth subcarbonate, and the light magnesium carbonate in large and oft repeated doses, and they do not advise rectal feeding excepting for at least three days after a gastric hemorrhage. It is somewhat of a surprise that they do not peptonise the milk for rectal feeding, and altogether do not give the practice of pre-digestion of milk the attention which its utility appears to demand. In the diagnosis of gastric carcinoma the use of Einhorn's gastrodiaphane is used to "assist in determining the size and location of the neoplasm, as the transillumination shows with less intensity or not at all through the carcinomatous anterior wall of the stomach in contrast to the brighter light transmitted through the rest of the organ." The chapter on gastrectasia and gastroptosis is very complete, and Einhorn's double tube gastric vaporizer has been found to act as an analgesic and slight motor stimulant. The authors emphasise the importance of surgical treatment of pyloric stenosis, especially of the benign kind, in which pylorectomy has been successful in 54 per cent., gastro-enterostomy in 71 per cent., pyloroplasty in 77·4 per cent., and digital divulsion in 59 per cent.

In addition to the topics named at the head of this review, the volume deals with infectious diseases common to man and animals, and with purpura, beri-beri, hæmophilia, diabetes, and insolation.

Lectures on the Malarial Fevers. By WILLIAM SYDNEY THAYER, M.D. Pp. viii., 326. New York: D. Appleton and Company. 1897.

The indiscriminate way in which the term malaria is generally applied to all sorts of febrile and afebrile conditions is an evidence of how backward medical opinion has been in appreciating recent advances in our knowledge of this subject. Professor Thayer's book will be found to contain a full, lucid, and succinct account of Paludism, the various chapters being devoted to history of the discovery of the parasite, methods of examination of the blood, description of the hæmatozoa, clinical description of the malarial fevers, sequelæ and complications, morbid anatomy, general pathology, diagnosis and treatment. A large number of illustrative charts are included, and also plates descriptive of the various phases of the parasites.

Clinically, the author recognises three varieties of malarial fever—tertian (including quotidian), quartan (including double and triple quartan), and æstivo-autumnal, these being respectively the result of infection by hæmamœba vivax, hæmamœba malariæ, and hæmatozoon falciparum. It has been customary to regard æstivo-autumnal fevers as due to a variety of organisms, but these the author is inclined to regard as a single variety of parasite. The crescentic and ovoid bodies, which have given rise to so much discussion, Professor Thayer considers are developed from the smaller forms in the ordinary cycle of development and are incapable of further development in the body. Manson's view, that the flagellated bodies represent the forms in which the malarial parasite exists outside the human body, does not meet with Professor Thayer's support, he himself tending to regard them as degenerate forms. That the mosquito acts an intermediate part he thinks is not proven. "On the whole, it must be said that we are absolutely ignorant of the form in which the malarial parasite exists outside of the human body, and equally ignorant of the manner in which it enters." In the clinical description the fact is emphasised that there may be a special localisation of the parasites in various organs, and thus the attack may take on a special type: thus, with the brain bearing the brunt, there may be coma, or bulbar paralysis, with localisation in the gastro-intestinal mucosa, choleriform symptoms may be the most prominent. The direct exciting cause of the malarial paroxysm Professor Thayer concludes is the liberation of some toxic substance by the specific parasites at the time of their sporulation. The discussion of this point, and indeed the whole chapter devoted to the general pathology, is full of the most interesting and original writing.

Under the head of "Treatment" is discussed the action of quinine on the malarial parasite, and the systematic and scientific administration of this drug is insisted upon, the writer giving it as his opinion that there is scarcely another drug

in the Pharmacopœia, unless it be digitalis, which is more abused.

Professor Thayer's book promises and deserves to become a standard work on the subject of malarial fevers.

Diabetes Mellitus and its Treatment. By R. T. WILLIAMSON, M.D. Pp. xi., 417. London: Young J. Pentland. 1898.

It is rarely that we meet with a work in which an author not only gives a clear account of valuable observations and studies of his own, but also a full exposition of the theories and experiments of other investigators, especially when these relate to minor branches of the subject where the writer's own interest is less keen. Dr. Williamson, however, has carried his thoroughness not only into his own extensive researches at first hand, and has not been satisfied with producing a brilliant essay on the subject from his own point of view, but he has presented us with probably the best existing abstract of the numerous papers on every aspect of the subject which have appeared during the last twelve years. It was a task much needed, for the recent literature has been so voluminous and scattered that reference to it had become practically impossible; and, apart from the scientific advances which have been made, a large number of practical improvements have been recorded both in treatment, diagnosis, and chemical tests.

It is refreshing to read the new light thrown on the usual tests, and of the errors usually committed. No precaution seems too small to notice, but we find that the author relies chiefly (even in detecting very small amounts of sugar) on Fehling's solution, phenylhydrazin, and fermentation. In difficult cases they are all used successively in the above order, and Fehling's test again applied to the urine which has gone through the fermentation process. The over-sensitiveness of phenylhydrazin is avoided by boiling for two minutes only, a valuable improvement which gets rid of the minute crystals formed from normal urine by the older method. Dr. Williamson confesses that the question of traces of sugar in healthy urine is still unsolved, though he shows reasons for disbelieving Pavy's estimate of .05 per cent. In any case, these and other ordinary tests are unaffected by it.

After discussing some of Pavy's recent controversies, with a brevity for which the reader will be grateful, he gives us a summary of the recent work relating to the pancreas, and finds reason to think that in certain cases diabetes is directly due to pancreatic disease, though it is not possible to say with certainty during life whether it is due to this or other causes.

It is important to find that he has rarely failed to find the tubercle bacillus in the phthisis of diabetes, though he recognises that rare cases occur where it is absent.

The analysis of the symptoms of coma is especially interesting, and not least the presence of a yellowish deposit in the urine, consisting of enormous numbers of granular casts, which is very often found just before the onset of an attack. Here also the author's test from the blood reaction with methylene blue becomes invaluable for diagnosis if no urine can be obtained.

The chapter on foods and treatment is particularly full and careful. The gain of weight and general condition of the patient is put forward as of more importance than a mere decrease of sugar, desirable as this is. When we come to the question of bread substitutes, the author shows the little value of many of the usual preparations, for which, indeed, a reduced quantity of ordinary bread can be given with more comfort and equally good results. He recommends a cheap and palatable preparation made from aleuronat and cocoanut meal, and having a very low percentage of starch, for use when a rigid diet is indicated. The receipts for the manufacture of this and other articles are clear and practical; and if there is little fresh to be learnt from the chapter on drugs, we feel that the subject is not one on which much can be said at present.

The book is issued in Mr. Pentland's best style, the printing and references are clear and good, and the volume will be of value to every one who is studying the theory of the disease or has to treat it.

Wesen, Ursache und Behandlung der Zuckerkrankheit (Diabetes Mellitus). Von Dr. ALBERT LENNÉ. Pp. iv., 152. Berlin: S. Karger. 1898.

Dr. Lenné has put together a clear and readable account of diabetes for physicians and students. As the outcome of a large practical experience, he finds little success in the use of drugs, though he considers that opium is of some value, and long-continued courses of alkalies when commenced early enough may indirectly produce good results. There does not appear any undue praise of the virtues to be found in the thermal springs of Neuenahr, where the writer practises, though the benefits of a course at a pleasant watering-place are not ignored. Of the value of rest for mind and body and the care of the general health he speaks strongly. As to other treatment, Dr. Lenné seems to rely chiefly on a diet carefully regulated from time to time according to the assimilative powers of his patients, and he prefers whole bread, in quantities such as can be easily dealt with in the body, to any of the artificial substitutes.

A review of modern theories of the pathology of diabetes is given in a succinct form, and extremely full tables of the sugar and starch contents of all possible articles of diet are added.

On the whole it is an interesting and well-written book, and in many points well up to date. Moreover, it possesses the luxury of a capital index, which adds considerably to its value.

A Text-Book of Practical Therapeutics. By HOBART AMORY HARE, M.D. Sixth Edition. Pp. 758. London: Henry Kimpton. 1897.

Seated in his editorial chair, Dr. H. A. Hare must see pass before him in review the vast crowd of therapeutical experiences and suggestions which is ever being recorded in the medical journals. That he has long since brought out a successful text-book of therapeutics is therefore not to be wondered at; this work in its present edition has been largely re-written, to bring it up more fully abreast with the present state of the art of which it treats. The two more important sections of the book are: (1) A description of the properties and uses of drugs, arranged in alphabetical order—a plan now adopted in most text-books of Materia Medica; and (2) A list of the principal recognised diseases, also arranged alphabetically, giving a succinct yet sometimes fairly full account of the accepted treatment for each disease. Although Dr. Hare is a Professor of Therapeutics, as well as editor of a journal devoted to the same subject, he is not unduly carried away by every ephemeral novelty. In the preface he says: "Only those measures which have proved useful and reliable in therapeutics are included." An examination of the text of the book certainly corroborates this statement, and we should indeed have been not sorry if some additional suggestions had here and there added to the well-tried measures enumerated. The article on the treatment of phthisis is almost depressing in its negations.

The book is excellently printed, wonderfully free from clerical or typographical errors, and is elaborately indexed. Everything that is affirmed in the book can be accepted as trustworthy, and altogether the work is a bright and worthy monument of the author's industry and learning.

Outlines of Practical Surgery. By WALTER G. SPENCER, M.B., M.S. Pp. x., 694. London: Baillière, Tindall and Cox. 1898.

The practical surgeon of the present day will be much relieved to find that the author has produced a work of such excellence, without going too deeply into the details of theoretical pathology and bacteriology.

The diagrammatic nature of the illustrations with which the various chapters abound are most clear, and by examining these "black and white figures" the student of practical surgery can readily comprehend numerous details in the operative art, which in some books are not too clearly explained in the text.

We are sorry to see in the pages devoted to bandaging that no mention is made of the good old method of "reversing" in spiral bandaging, and we do not quite agree with the text as to

where the spiral bandage may be used. It is certainly doubtful whether (if we except the joints) the commonest method of bandaging is the figure-of-eight. We do not like the description of the suturing of the two ends of the divided intestine round the male and female portions of Murphy's button; the approved method might, in a future edition of the book, be clearly demonstrated by a diagram.

On reading the volume through we find little of importance to detract from its value, and we recommend it as a most useful addition to the library of those wanting a practical book on surgery.

Wounds in War. By Surgeon-Colonel W. F. Stevenson, M.B. Pp. xv., 419. London: Longmans, Green, and Co. 1897.

It is with great satisfaction and interest that we have read this book of Surgeon-Colonel Stevenson's, and we welcome it cordially, for no one should be more qualified to speak on the subject than the Professor of Military Surgery at Netley. Practically, as Colonel Stevenson points out, the subject is limited to gunshot wounds, those inflicted by sword or bayonet being, at least in warfare between civilised nations, a negligable quantity. Not that our author has by any means omitted to mention other injuries, but he has given them only a small share of his consideration proportionate to their importance. In his clearly printed pages, abundantly illustrated and well furnished with diagrams and tables, he has embodied a vast store of information useful to the military surgeon, and by no means wanting in interest to his civilian *confrère*. Each paragraph is headed with its subject in heavy black type, a plan which increases the value of the book as a work of reference.

The first chapter deals with the mechanism of projectiles, their motion and velocity, and the effects upon them of the resistance of the air and gravitation. It concludes with a description of the Lee-Metford magazine rifle, which has been described as "the best military small arm in existence." We record this fact with some amount of pride, as the part-inventor of this weapon is a Bristol citizen. The second chapter details the characteristics of injuries produced by different projectiles —by the old round bullet, the modern cylindro-conoidal bullet, and by large projectiles and their fragments.

A short chapter is devoted to the primary symptoms of wounds, namely, pain, local shock, anæsthesia, hemorrhage, and the treatment of these conditions, followed by a consideration of the general treatment of wounds in war, with an interesting contrast between the old and new methods, and the bacteriology of wounds. Under the heading "First Field Dressings," great stress is laid upon the importance of the handling of a wound as little as possible, in order to avoid the introduction of septic material.

We are now introduced to the more special subject of the book, namely, gunshot wounds and their treatment. Our author, after again emphasising his remarks on the non-interference with wounds on the field, describes the various means of detecting the extent of injury, and the presence of a bullet or other foreign substance. The finger of the surgeon, Nélaton's probe, or other more clumsy contrivance for diagnosis, will, for the future, be superseded by Röntgen's marvellous discovery, and one incalculable source of danger to the wounded soldier avoided. The risk of secondary hemorrhage, an accident far less common than it used to be, and caused by disintegration of the wall of the vessel by septic arteritis, is minimised by the introduction of the antiseptic treatment of wounds.

From the general consideration we pass to a most interesting and carefully compiled description of the injuries of individual structures of the different joints, the long bones, head, thorax, and abdomen, the indications for conservative treatment, for amputation, and cautions in dealing with penetrating wounds of lung and brain. All these are of great practical value.

The ninth chapter deals with wounds of the abdomen. Penetrating wounds of the abdomen are by far the most fatal of all injuries in war, the mortality running as high as 90 per cent.

It would, we think, be advantageous to found upon the details given in these valuable chapters a small handbook of aphorisms which could be regarded as authoritative, and would, if well put together, be a safe guide and help to the military surgeon in those formidable emergencies with which he may be brought into contact.

The thirteenth chapter is devoted firstly to statistics, and secondly to a description of the duties of bearers in the field, the first dressings, transport of the wounded, and the management of the field hospital, whilst the concluding chapter gives us a *résumé* of the work of the Geneva Convention, and expresses a hope that its suggestions will in time meet with a more general appreciation, and that the Red Cross will be universally recognised as a military badge of neutrality.

An American Text-Book of Genito-Urinary Diseases, Syphilis, and Diseases of the Skin. Edited by L. Bolton Bangs, M.D., and W. A. Hardaway, M.D. Two volumes. Pp. 1—592, 593—1229. London: The Rebman Publishing Co. (Ltd.). Philadelphia: W. B. Saunders. 1898.

The combination of genito-urinary diseases with dermatology, or even with syphilis, is rather astonishing to English readers, but seems to be quite a usual trans-Atlantic practice, as there is an American *Journal of Cutaneous and Genito-Urinary*

Diseases. The articles in this work are by various writers, some of whom are well known for their contributions to the literature of the subject on which they write. Dr. White, of Philadelphia, for instance, writes on diseases of the prostate in conjunction with Dr. Wood, and his recent remarks on the treatment of prostatic hypertrophy by castration and vasectomy are of particular value. It is curious to find "inflammation of the seminal vesicle, the cord, and epididymis, and the testicle proper" as the heading of a section of a chapter, but the author evidently attaches great importance to diseases of the seminal vesicles, and their diagnosis. The subject of diseases and injuries of the ureter is, as might be expected in a modern work, treated in a separate chapter, and by so able a writer as Christian Fenger.

The more recent views about ringworm—including Sabouraud's—are clearly put forth; but ultimately, we feel sure, they will be modified: and the treatment of that comprehensive disease, eczema, is good and rings with common sense. We read: "The successful treatment of eczema is something more than the hasty prescription . . . for internal use and a salve or lotion for external application," and we note with strong approval that all eczemas should be cured. "Internal treatment . . . is not called for in a large proportion of the cases," and "it may be expressed as almost a law that the more circumscribed an eczematous eruption is the less will be needed in the form of general medication; . . . local eczemas require local applications." We have still the long-standing dispute about lichen ruber acuminatus, lichen ruber, and lichen ruber planus, and it "bids fair to afford abundant material for discussion for some time to come."

The work contains a very thorough and valuable collection of information on the subject of genito-urinary surgery, and the numerous illustrations are good, in this portion particularly those of hypertrophy of the prostate gland, in connection with the article by Drs. White and Wood, while the coloured plates and other illustrations of skin diseases are very faithfully and artistically executed; some of them are the best we have seen in any similar kind of work. We commend the book very heartily. There are many very useful prescriptions and the classification of skin affections is as good as it can be with the present nomenclature.

Text-Book of Diseases of the Kidneys and Genito-Urinary Organs. By Prof. Dr. PAUL FÜRBRINGER. Translated by W. H. GILBERT, M.D. Vol. II. Pp. vi., 310. London: H. K. Lewis. 1898.

The first volume of this work, which dealt with the medical aspect of the subject, was favourably reviewed by us in March, 1896. Of the second volume, which considers the surgical diseases

of the organs in question, it is not possible to speak highly. In fact, the diseases of the genito-urinary organs are now so specialised that it is impossible for one man to deal satisfactorily with the whole of them. It would have been better if the author had confined his information to the diagnosis and medical treatment of those diseases of the urinary organs which fall to the lot of the physician.

The bibliography seems an important feature, but it is arranged alphabetically only according to the authors' names, and not according to subjects. It seems to us that, with Mr. Jacobson's work on diseases of the male genital organs and Mr. Henry Morris's recent book on diseases of the urinary organs, and the very full consideration of the subject in our larger text-books of surgery, there was really no need for the translation of Professor Fürbringer's second volume. To English readers some of the terms used are rather remarkable. For instance, hydrocele in connection with epididymitis, which we should call an acute hydrocele, is spoken of as periorchitis acuta.

The author regrets that pain in the groin is not recognised as common in acute epididymitis. We should certainly have considered that it was known to every observant student. The diagnosis of renal calculus from the other morbid conditions which may readily be mistaken for it receives most inadequate notice, and the reference to the surgical treatment of renal disease is very imperfect and unsatisfactory. Much space is given to an enumeration of the various futile attempts which have been made to discover the condition of the separate kidneys, and yet there is no mention of the work of Howard Kelly in this direction.

We cannot recommend the work either as a concise statement of the leading facts of genito-urinary surgery, or as any approach to an exhaustive treatise on the subject. Some of the information given we even regard as dangerous. For instance, in speaking of the diagnosis of renal cancer, we are told of a case in which aspiration was not only used, but repeated several times for diagnosis, and then after death it was found that the growth was in the "small omentum" and not in the kidney at all! Surely such proceedings are highly dangerous and not to be recommended by illustrative cases. Then again, in speaking of the treatment of stone in the bladder, we are told that the bladder has been opened from the rectum, as if such a proceeding was an approved method of operation.

The Diseases of the Male Urethra. By R. W. STEWART, M.D. Pp. viii., 221. New York: William Wood and Company. 1896.

This is a very useful book, which treats of inflammatory affections of the urethra and their result in the form of stricture. As gonorrhœa is so common it is worth while devoting some

considerable time to the study of this disease and its sequelæ. Modern methods of diagnosis, such as the use of the endoscope, are fully described, and the affections of different portions of the urethra considered in separate chapters. The inflammatory diseases of the seminal glands which are connected with the urethra are also considered. We were rather staggered by the word "Cowperitis," which, although not new, is one against which we must enter an etymological protest. There are some good pictures of the anatomy of the urethra and useful representations of instruments employed in urethra diagnosis and treatment, and the book is a decided acquisition to the literature of the subject. The fact that the publishers' work has been done in so excellent a fashion makes it all the more acceptable.

Orthopedic Surgery. By JAMES E. MOORE, M.D. Pp. 354. London: The Rebman Publishing Co. (Ltd.). Philadelphia: W. B. Saunders. 1898.

When another volume upon a small branch of general surgery is added to those which already exist we have a right to claim that it shall be justified by some evidence of originality in the method of treatment, or at least of such care and judgment in examining controversial points, and in fully and accurately setting forth the more recent additions to our knowledge, as shall make it something more than a numerical addition to an overburdened literature. Unfortunately, in both these respects, the work under review, in our opinion, signally fails. For example, in the section on knock-knee nothing is said about the possible *rôle* of the tibia and fibula in the pathology of that affection: pes cavus receives the consideration of only a few lines; while of the important and relatively little-known conditions, termed metatarsalgia and coxa vara the accounts are so meagre and inadequate as to be almost, if not quite, valueless. Nor do we find any compensation in the treatment of the more ordinary portions of the subject, which never rises above mediocrity and is often weak and unsatisfactory.

The publishers' work has been excellently done, and there is no lack of illustrations, well executed, which are liberally scattered through the letterpress.

The Practice of Midwifery. By D. LLOYD ROBERTS, M.D. Fourth Edition. Pp. xv., 585. London: J. & A. Churchill. 1896.

Clear and succinct and quite modern in all its practical part, this book is a very trustworthy manual for students.

The author lays great stress on the proper measures to be used to attain asepsis as far as is possible, and his directions, if

followed carefully, will, without being over elaborate, be found amply sufficient.

In describing the mutilating operations for the relief of dystocia he mentions cranioclasm as being the operation of breaking up the base of the skull after craniotomy; we have always been under the impression that this operation was known as basiotripsy while cranioclasm is the operation by which after perforation the vault of the skull is removed piecemeal.

One noteworthy feature is an excellent chapter on symphysiotomy, which gives the completest account of the operation that we have yet met with in any student's manual.

The work, offering a logical and accurate account of the various processes, will form a valuable addition to the student's library. The plates are numerous and well drawn.

Treatise on the Diseases of Women. By ALEXANDER J. C. SKENE, M.D. Third Edition. Pp. xviii., 991. New York: D. Appleton and Company. 1898.

It is six years since the publication of the last edition of this work, and during that period great advances have been made, which have been duly incorporated in the present issue. The treatment of uterine fibroids has been fully brought up to date, but a more clear statement should have been made of the indications for adopting the different methods. The author believes that electrolysis "takes a high rank among the means of treating fibroma of the uterus," but we are not told the class of case in which he considers it desirable to use it. Too much space is given to the "illustrative cases," which, though interesting, occupy a greater part of the book than is warranted by the instruction they afford. The various subjects are handled with such thoroughness and judicious care as the great experience of the author would lead us to expect. A word of praise should also be given to the excellent plates and drawings with which the work is illustrated.

Therapeutics of Infancy and Childhood. By A. JACOBI, M.D. Second Edition. Pp. xvi., 9—629. Philadelphia: J. B. Lippincott Company. 1898.

It is a pleasure to find that some medical man can avoid the stiff and stilted style that is commonly adopted when giving opinions. Dr. Jacobi writes easily—almost conversationally, and frequently forcibly—so that the task of reading a big book like this is comparatively slight. Unless this is a natural faculty an author may, to create a sensation, overstep the bounds of easy writing and become ridiculous and abusive. We regret to say that Dr. Jacobi has sometimes done this; and we think that the author's disapproval of Emil Behring's methods

might have been expressed in less severe language with advantage.

Apart from these blemishes, the book is a very useful one, and contains the opinions and experiences of an acute observer, and as such will be of great value to students of children's diseases. There are things which we do not agree with, but that possibly is inevitable. For instance, in this country Rötheln is looked upon as a separate disease, and though acute rheumatism is common among children it is not in our experience frequently seen in infants. Scrofula we generally take to be synonymous with tubercle, but Dr. Jacobi thinks that the bacillus need not be present; and we must express our surprise at ossification of the costal cartilages (and consequent want of expansion of the lung) being a cause of tubercular disease of the lungs.

The Natural and Artificial Methods of Feeding Infants and Young Children. By EDMUND CAUTLEY, M.D. Pp. viii., 376. London: J. & A. Churchill. 1897.

Of the many works that have been produced during the last few years on this subject there is not one that we can recommend more heartily than this. There is little that is new in it, but the author has condensed into a comparatively small space, without undue curtailment, all the recent investigations on the methods of preparing foods for the infant and juvenile stomach. The chapter on proprietary foods is particularly good, and we are in thorough accord with the author in his dictum that in the vast majority of cases in which tney are being alone given the child is being deprived of more suitable and appropriate food. We admit with him that several may with advantage be given on occasions: it is the abuse of them that we condemn, and the abuse is more common than the appreciation.

The Study of Children, and their School Training. By FRANCIS WARNER, M.D. Pp. xix., 264. New York: The Macmillan Company. 1898.

The excellence of Dr. Francis Warner's work in connection with the study of childhood is generally recognised; all that is here requisite is, to note the principles and construction of the book under review. Skilful adaptation of the mode of education to the needs of the particular child is the author's contention; and the proposition that all expression of the action of mind is by movement, is adopted as the basis of observation-methods. Thus, says the author, movements, balance, gestures, actions and response indicate the child's brain-state; and it should, therefore, be an object in training children to remove their faulty nerve-signs, or irregular or bad methods in movement, and with

them the co-related brain-disorderliness. The earlier chapters deal concisely with the growth and development of the child's body and mind, the points to be considered in seeking indications of normal and abnormal nerve-signs; in later ones are discussed relative mental ability and psychological changes during pubescence. Subsequently comes the practical portion of the book, which deals with the removal of both motorial and mental disorders by physical training and the correction of various unhygienic conditions. Some pithy generalisations are usefully appended in the final chapter. The work should prove of interest and value to all those engaged in the education of children or in the study of them psychologically.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D. Second Edition. Pp. xiv., 683. London: Charles Griffin and Company, Limited. 1898.

In March, 1894, we noticed the first edition of this work, and considered that it would prove useful for students to peruse before an examination, owing to the condensation of its matter, and help the general practitioner who has no time to refer to the larger manuals. In this second edition improvements have been introduced in many parts. Cases are more frequently given and at more length. Some useful paragraphs have been added in the section dealing with sudden death from natural causes. Under the head of "Life Assurance," something, we think, ought to have been given as the probable duration of life in those suffering from organic diseases: a rather difficult subject, no doubt, but one which is only slightly treated even by the authorities on general disease, to whom we are referred by Dr. Mann. We notice the absence of any account of gunshot wounds caused by modern weapons of precision and the new bullets—for some strange accidents have been caused by them, and suicides effected by their use. Under "Heat-Stroke" there is no mention of how frequently insanity of a dangerous and incurable form follows on an attack. Amongst the poisons, acetylene, now coming so much into use, is noticed, as are also some of the aniline group and poisonous foods.

Epidemic Diphtheria: a Research on the Origin and Spread of the Disease from an International Standpoint. By ARTHUR NEWSHOLME, M.D. Pp. iv., 196. Swan Sonnenschein & Co., Limd. 1898.

This painstaking and valuable contribution to the epidemiology of diphtheria deserves careful study. The first part of the book is taken up with graphic charts showing the behaviour of diphtheria over a long series of years in towns and districts in all parts of the world. The second half of the book contains

Dr. Newsholme's review of the prevalence of diphtheria as shown in these charts, a discussion of the conditions determining pandemics of diphtheria, the relationship of rainfall and of soil to diphtheria, and a review of the position of preventive medicine in relation to the still-increasing prevalence of this disease. While Dr. Newsholme's conclusions place "waves of diphtheria-prevalence" on a plane above our control, the admission that diphtheria is spread chiefly by personal infection, which is, however, immensely more potent in epidemic than in inter-epidemic years, encourages the hope that present-day methods of control, including bacteriological supervision of throat-cases, should prove effectual in checking its spread.

An Inquiry into the Relative Efficiency of Water Filters in the Prevention of Infective Disease. By G. SIMS WOODHEAD, M.D., and G. E. CARTWRIGHT WOOD, M.D. Pp. viii., 135. London: Printed at the Office of the British Medical Association. 1898.

This is a reprint in book form of a very valuable report upon all classes of domestic filters, with special reference to their power of removing pathogenic organisms from polluted water. A considerable number of filters, representing probably all the numerous types that have been placed upon the market, are examined in detail as regards their permeability both to ordinary water bacteria and to pathogenic forms. The authors arrive at a very important conclusion, already sufficiently recognised by those who have made a special study of the matter, but never perhaps formulated in so complete and authoritative a manner. None of the filters charged with the pulverulent or fibrous media, until lately so universally in use, afford the least protection against the passage of the causative agents of enteric fever or cholera; but, on the other hand, these filters are likely to prove sources of danger as secondary means of contaminating pure water. Differences in the rapidity of transmission of bacteria were noticed, and were attributed to the varying length of time necessary for washing the organisms through different thicknesses of filtering medium: and it would have added much to the interest of the report if the real efficacy of the sand filter-beds, upon which so much reliance is placed at the present time, had been tested on parallel lines. The only filters that were found to effectually exclude pathogenic bacteria were those in which the media employed were "forms of porcelain, compressed silicious earth and natural stone." In order, however, to bring about a sufficient rapidity of flow through these denser media, it is in general necessary to apply additional pressure, a proceeding which severely tests the mechanical fittings as well as the perfection of structure of the filter itself.

A second deduction from this noteworthy series of experi-

ments is of great scientific interest; namely, that no filter is proof against bacteria capable of growth in the liquid undergoing filtration. No filter, therefore, permanently removes the ordinary water organisms which appear in the filtrate after a lapse of from two to four days, owing to growth along the pores of the filter. A precisely similar result is attained with typhoid and cholera bacilli if as little as one-fiftieth part of ordinary broth is added to the water; no such effect, however, is produced by the addition of sewage, water deposit, or other organic matters likely to occur in natural waters, and it seems improbable, therefore, that risk of this kind would be incurred in actual practice.

The whole report teems with exact and detailed information on many vexed questions; and will well repay perusal by all concerned in the maintenance of the public health.

From Our Dead Selves to Higher Things. By FREDERICK JAMES GANT. Second Edition. Pp. xiv., 185. London: Baillière, Tindall & Cox. 1897.—It is always refreshing to find that a busy surgeon has time to write on matters other than those concerning his profession, and most of us will be the better for reading this expression of the author's inner thoughts. The high-toned morality of the work is unquestionable, but to say with the author that "the veil of 'Agnosticism' is rent in twain from the top to the bottom" depends on the point of view of the reader.

The Determination of Sex. By Dr. LEOPOLD SCHENK. Pp. 173. London: The Werner Company. 1898.—The first half of this book is a discursive account of the various theories which have been held as to the determination of the sex of children. The latter half deals with Dr. Schenk's researches on the subject. They amount to this—that many women, though not considered to be diabetic, pass minute traces of sugar in the urine. Such women generally have female offspring. If these traces of sugar be removed by a diet consisting mainly of proteids and fats, males are produced. The evidence offered in support of this theory is most meagre and unsatisfactory. Some things doubtless are better done in Germany; but it is refreshing, after looking over this volume, to turn to the *Evolution of Sex*, by Geddes and Thomson, who give a lucid account of what is known on the subject.

Rheumatoid Arthritis. By GILBERT A. BANNATYNE, M.D. Second Edition. Pp. xii., 182. Bristol: J. Wright & Co. 1898.—There has been some revision and improvement in this book, which now forms a fairly complete work on the subject. The theory advanced in the first edition as to a microbic origin for the disease is altered in some respects, the author coming to the conclusion that there are at least two forms of rheumatoid

arthritis—the one acute and undoubtedly of microbic character, the other chronic and degenerative. No evidence, however, is given as to whether the micro-organisms characteristic of the acute forms are found in the chronic ones, and the relationship of the two is left indefinite. The treatment advocated is much the same as in the former edition. A regrettable point is that the author barely mentions the excellent results which have been obtained by the action of high temperatures, by the hot air or electric radiant baths.

The Extra Pharmacopœia. By WILLIAM MARTINDALE and W. WYNN WESTCOTT, M.B. Ninth Edition. Pp. xxviii., 626. London: H. K. Lewis. 1898.—A work which in a comparatively few years has reached its ninth edition stands in need of no commendatory criticism. The British Pharmacopœia becomes continuously more and more inadequate to fulfil the requirements of practice, and a text-book of information such as this present excellent work is now a necessity. In this last edition have been incorporated all the essential contents of the new B.P., while in addition there is a wondrous store of instruction about the multitude of remedial agents in the use of which the B.P. in its narrow scope does not take notice. A monument of industry, of up-to-date learning, and of usefulness, this book is indispensable to every intelligent practitioner who desires to employ the full therapeutical resources of his art.

Chavasse's Advice to a Wife. Revised by FANCOURT BARNES, M.D. Fourteenth Edition. Pp. 306. London: J. & A. Churchill. [1898.]—We consider that this edition maintains the reputation that previous ones have made for this very useful work. The introductory chapter on the health of the young wife is very good, and can be read with advantage by all women. The portion that follows is more or less pertinent to the subject of pregnancy, and can be recommended as a very good guide.

Chavasse's Advice to a Mother. By GEORGE CARPENTER, M.D. Fifteenth Edition. Pp. x., 430. London: J. & A. Churchill. [1898.]—Few books of this character, we believe, have proved more popular and useful than this, and we are bound to say that it is head and shoulders above the usual manuals intended to instruct mothers on their duties towards their babies. In revising the present edition and relegating the few prescriptions to an appendix, Dr. Carpenter has done well and wisely. About such light and airy conversations as we find here there is a charm which has always attracted us ever since we learnt our first lessons of science from Dr. Brewer's *Guide to Knowledge;* but no book of this kind that we have ever seen has treated us to so many quotations from the poets: Byron, Coleridge, Martin Tupper (!), Shakspere, Barham, Knox, Tennyson, and many others are quoted; while even the author, under the influence of the question of the propriety of sucking one's thumb,

breaks out into verse. We commend the advice to the mother on her behaviour to her doctor on pp. 323–5, and only wish we were always treated with so much consideration.

Brief Essays on Orthopædic Surgery. By NEWTON M. SHAFFER, M.D. Pp. v., 81. New York: D. Appleton and Company. 1898.—Those interested in orthopædic surgery as a speciality will do well to read these short essays, which are reprinted from various periodicals. They define the position of the orthopædic surgeon and urge the desirability of conservatism. They deplore the tendency of some specialists—gynæcologists, for example—to commit depredations in the fields of general surgery.

The Diseases of Children's Teeth, their Prevention and Treatment. By R. DENISON PEDLEY. Pp. xi., 268. London: J. P. Segg & Co. [1895.]—Considerable praise is due to the author for his attempt to interest medical students and practitioners in this subject. The book is very readable, not too long, and contains very practical hints. The chapters on oral hygiene and irregularities of position are excellent. It is a pity that the author advocates a proprietary tooth powder. Still, on the whole his book fulfils its aim as well as any work of the kind with which we are acquainted.

Diseases of the Upper Respiratory Tract. By P. WATSON WILLIAMS, M.D. Third Edition. Pp. xvi., 282. Bristol: John Wright & Co. 1898.—This work has evidently met a well-marked requirement. It contains in a small compass much valuable information, and though it is practically a reprint of the previous issue, it is well up to date and forms a handy guide to the subject.

The Johns Hopkins Hospital Reports. Vol. VII. Nos. 1–2—*Report in Gynecology.* Baltimore: The Johns Hopkins Press. 1898.—The greater part of this report is taken up with a "critical review of seventeen hundred cases of abdominal section from the standpoint of intraperitoneal drainage," wherein the observations of the author, Dr. J. G. Clark, go to show that the drainage-tube is still used too largely in abdominal work. The rest of the book is concerned with "the etiology and structure of true vaginal cysts," written by Dr. J. E. Stokes. Of the merit of these reports we have frequently spoken, and the present work further enhances the solid reputation which they have gained for accurate and painstaking research.

The Middlesex Hospital. Reports of the Medical, Surgical, and Pathological Registrars for the Year 1896. London: H. K. Lewis. 1897.—These reports comprise an elaborate classification of all the cases in the hospital during the year, with abstracts of the more important ones and of *post-mortem* examinations. Attention may be directed to the tables on diphtheria, the classification of cases of hernia, and of over thirty cases of operation on the kidneys. Seven out of sixteen

cases of strangulated hernia were fatal, a high mortality now-a-days. Thirty-one cases of appendicitis were admitted to the medical wards, twenty of which recovered, one died, and the rest were transferred to the surgical wards, where twenty-three cases were admitted altogether, five being fatal. In thirty operations on the kidney, two only were followed by death. It is interesting to note that seven of these proved negative explorations, four for nephralgia and three for hæmaturia, *i.e.* nearly 25 per cent.

Clinical Report of the Rotunda Hospitals, 1896-97. Dublin: John Falconer. 1898.—The master and his assistants are highly to be congratulated both on the excellent results obtained, and the manner in which the results are tabulated and presented for perusal. Three thousand four hundred and fifty-five cases were attended, with a total maternal mortality of seven or ·205 per cent. Only two deaths are attributed to sepsis. The number of cases in which the temperature reached 100.8° F. was seventy-eight, but in only fifteen was it considered necessary to wash out the uterus. A review of the work of the gynæcological department contains a very interesting account of the arrangements of the operating theatre, methods of sterilising hands, clothing, instruments, sutures, ligatures, etc. In all plastic operations on the vagina, a preliminary curetting of the uterus is done: this procedure might be more widely adopted with advantage. The lists of operations, the mortality of the same, and the reasons explaining the deaths should all be read in the original paper. The mortality of eleven vaginal cœliotomies, and fifty-five ventral cœliotomies, including nine panhysterectomies, was eight or twelve per cent.

Transactions of the College of Physicians of Philadelphia. Vol. XIX. Philadelphia: Printed for the College. 1897.—The usual obituary notices and presidential address are followed by a selection from the papers read during the year. One of the most noteworthy of these is by Dr. Alfred Stengel on the value of auscultatory percussion in diagnosis. The different methods of stethoscopic percussion are described, and the author gains confidence in the method in accordance with increasing experience: his general conclusions are in accord with other writers, who have learnt the method in one or other of its various forms. A paper by Dr. Charles Winslow Dulles advocates the view "that consumption is not a disease that is now spreading," but that "for many years there has been a comparatively steady decline in the proportion of cases of consumption": he combats the current views in favour of contagion, and entertains the hope that without spasmodic and violent measures the disease will soon cease to be the scourge and terror that it now is.

Transactions of the American Pediatric Society. Vol. IX. Reprinted from *The Archives of Pediatrics.* 1897.—Several interesting papers will be found in these records; notably a

paper by Dr. J. O'Dwyer on retained intubation tubes, based on an experience of over five hundred cases of intubation. Dr. Koplik describes his method of rapid bacteriological diagnosis of diphtheria in two to three hours. There is an interesting paper on several cases of retro-œsophageal (intrathoracic) abscess presenting anomalous symptoms, and on five cases of cerebral abscess in infants. Empyema, pneumonia, and many other interesting subjects are considered.

Transactions of the Dermatological Society of Great Britain and Ireland. Vol. III. London: H. K. Lewis. 1897.—There seems to be life in this Society, for the volume before us contains more than double the matter of the previous one. The address by the President, Dr. J. F. Payne, on "Bacteria in Diseases of the Skin," is well worth perusal; it contains many deep thoughts, and there is no doubt that the "pathology of this organ [skin] is decidedly in advance of that of many other parts in regard to the subject of inflammation." The article on "Yaws in India" by Mr. Arthur Powell is almost exhaustive of the subject; and "The Influence of Light on the Skin," by Dr. R. L. Bowles, shows the competency of the author to discourse on the subject. We should like more pictures of the quality of that which illustrates Dr. Abraham's case of pustular eruption from tar..

The Year-Book of Treatment for 1899. London: Cassell and Company, Limited.—This, the fifteenth annual issue, is excellent in point of merit and general usefulness to the practitioner, and in saying this, we afford it the best recommendation to all those who are not acquainted with this summary of the year's progress. We note one new feature this year in the able article by Dr. Burton-Fanning on "The Open-air Treatment of Phthisis."

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army.—Second Series. Vol. III., C—Czygan. Washington: Government Printing Office. 1898.—The present volume of this monumental work bears the same impress of elaborate care and indefatigable energy which has characterised the previous volumes. It is indispensable to all libraries and writers on medical subjects.

The Journal of Tropical Medicine. London: John Bale, Sons & Danielsson, Ltd.—This is a monthly Journal devoted to medical, surgical, and gynæcological work in the Tropics, and is under the direction of Mr. James Cantlie and Dr. W. J. Simpson, whose long experience of disease in the East entitles them to speak with authority on the subject of tropical medicine. It began life in August, 1898, and has been added to our exchange-list. Amongst noteworthy contributions to the earlier numbers of this periodical are articles—by Sir Joseph Fayrer, "Enteric Fever among British Soldiers in India"; by Haffkine and Bannerman, "The Testing of Haffkine's Plague-Prophylactic in Plague-Stricken Communities in India"; by Rogers on "The

Distribution and Harmfulness of the Anchylostomum"; and by Voorthuis on "Unna's New Method of Treating Leprosy." Space is also devoted to an epitome of recent literature on tropical medicine and to reviews of books bearing upon this subject.

Journal of the Boston Society of Medical Sciences. Boston, U.S.A.—We welcome this Journal as a new exchange. It contains papers of more than local interest, and shows that the Boston Society is doing very good work. With the Medical School of Harvard University and the various other scientific institutions in Massachusetts, its opportunities are great. The opening number of the new volume contains a careful investigation into "The minute Anatomy of the Oblongata and Pons of the Chimpanzee, with special Reference to their Homologies with Man."

Notes on Preparations for the Sick.

Ichthalbin. Ichthyol Capsules. Desichthol. — GUSTAV HERMANNI, Jr., London.—**Ichthalbin** is described as an "insipid powder for internal use, acting as an astringent and disinfectant on the bowels." It is presumably an ichthyol-albumin compound: it is practically tasteless, and should be of service in conditions where intestinal antiseptics are indicated. It does not contain any *soluble* albumin. **Ichthyol Capsules** are described as appetite promoting and nutrition increasing. **Desichthol** is an almost inodorous ichthyol, and is said to be analgesic and antiphlogistic in all forms of painful internal or external inflammation, but we have not been able to verify all these statements.

Granular Effervescent Preparations: Bismuth, Pepsine, and Strychnia; Iron and Arsenic; Salicylate of Lithia. — ALFRED BISHOP & SONS LTD., London.—Bishop's useful preparations are for the most part well known, and have been greatly in use for years. They often do good service in cases of anæmic and other forms of dyspepsia.

Tabloids: Hypophosphites Compound; Zinc Oxide.—BURROUGHS, WELLCOME & Co., London.—These new tabloids should be useful: of the former two strengths are issued, representing respectively half a drachm and one drachm of the compound syrup of hypophosphites. The rapid disintegration of the zinc oxide tabloid when dropped into water ensures its therapeutic activity. The convenience of the tabloid form must increase

the utility of an often forgotten but valuable drug in the treatment of summer diarrhœa, gastralgia, epilepsy, chorea, and other results of nerve defects.

Iron Somatose; Milk Somatose. — FRIEDR. BAYER & Co., Elberfeld.—The first of these preparations is a light brown powder, soluble in water, and containing about 2 per cent. of iron. The dose is from 80 to 160 grains three times a day, and as the price is two shillings for one ounce it follows that this must be a very expensive method of giving iron in cases of anæmia. It does not therefore seem to be suitable to the ordinary case, but when other methods do not give satisfactory results this powder may be worthy of trial. The milk preparation contains 5 per cent. of tannic acid; it is therefore somewhat astringent, and more especially applicable to those patients who have a tendency to diarrhœa.

On the Somatose itself we commented in the *Journal* for September, 1895.

Digestive Brown Bread; Diabetic Bread. — J. S. NEWEY, Bristol.—Samples of these breads have been sent to us. They are excellent preparations, likely to be of use both in sickness and in health. The **Digestive Bread** is well named, inasmuch as it is made from malt flour mixed with wheat-meal flour, the malt being stewed for several hours until it attains a heat of 170 degrees. The bread is highly palatable, and it keeps moist and fresh for several days. Being made from whole meal, being well fermented and properly baked, and having the malt digestive intermixed, this bread should be highly nourishing and easily digested.

The **Diabetic Bread** is composed of aleuronat meal and cocoanut flour, mixed with eggs; the meal used in its preparation contains only a small percentage (5 to 7) of starch, and hence the product must be a valuable addition to the dietary of the diabetic patient, who is commonly very intolerant of the various kinds of gluten bread and cannot be induced to persevere with them. If we were diabetic we should feel no hardship in having to take bread like this; we cannot say that we prefer it to other kinds containing starch in quantity, but it is quite agreeable to the palate and retains its moisture well. We congratulate Mr. Newey on having accomplished—what appears to have been a difficulty hitherto—the manufacture in Bristol of an excellent bread for diabetics, which should obtain something more than a mere local reputation.

Harzbach.—BROWN BROTHERS & Co., Glasgow.—This comes to us accompanied with the details of an analysis made by Dr. E. J. Mills, F.R.S. Notwithstanding, or perhaps in con-

sequence of, its manifold composition, it is a very palatable mineral water and it is well aërated. We mixed it with brandy and found in the compound a very pleasant reminder of Apollinaris under similar conditions, and this is giving it high praise.

The "Copeman" Throat and Nasal Spray.—S. Maw, Son, & Thompson, London.—This is a simple throat-spray without any indiarubber tubes, specially adapted for use in diphtheria. It is easy to use, and can be kept aseptic. The only objection to it that we can see is that the metal tube would be liable to be acted on by acids, but for many solutions it would be far more simple and cleanly than the ordinary form of throat-spray.

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

December 14th, 1898.

Dr. R. Roxburgh, President, in the Chair.

Dr. J. Michell Clarke showed a man, aged 60, suffering from acromegaly. The characteristic enlargement of the lower part of the face, hands and feet was well marked. The tongue was very large, and the speech consequently indistinct. The back was bowed, the sternum and chest massive, and the head carried forwards. With the exception of slight deafness, the special senses were normal, and the visual fields were of normal extent. The fundus oculi was normal in each eye. The patient said that neither he nor any of his friends had noticed any change in the appearance of his face or hands, and he thought that his appearance had been as it is now for many years. He had always enjoyed good health, and been able to follow a laborious occupation, and complained only of pains in the loins of two weeks' duration. He had never had syphilis.

Dr. C. Elliott showed a boy, aged 11 years, suffering from a skin eruption which seemed to conform to Hebra's "lichen ruber planus." The disease had existed for over five years, and had begun after an attack of scarlatina for which he had been treated in the Homerton Fever Hospital. The patches, at first the size of millet seeds, have gradually enlarged till now they vary from the size of a threepenny piece to a crown-piece. They are situated on the trunk, both upper and lower extremities, under the chin, on the forehead, and both ears. There is no history of syphilis, but the boy had suffered from hip-disease on the left side about six years. His general health is now good, and he has no trouble with his hip beyond some shortening. Both parents are living and well. Mother has had seven children: four (including the patient) are living; two died of diphtheria, and one was still-born. All treatment had been of little or no benefit. Arsenic, iron, mercury with iodide of potassium, and thyroid extract had been given internally.

Locally, ointments of ichthyol, resorcin, chrysophanic acid and borax, the latter seeming to be the most useful. In the autumn, scarification was tried—"mincemeating" the patches; and although these had not been cured, yet a good effect had been produced, namely, in relieving the constriction felt by the patient and allowing him greater freedom of movement.—Dr. H. WALDO thought it may be a case of what Jonathan Hutchinson calls lichen-psoriasis; but unfortunately he could not discover any papules, the presence of which would make the diagnosis easy. There were only patches accompanied with, perhaps, some pigmentation.—Dr. A. J. HARRISON expressed his doubts about the case being one of lichen ruber planus; but it might be one of the rare forms described by the late Professor Hebra. The papular character is very characteristic in these cases, the angular nature of the papules being well marked. Dr. Harrison showed a photograph of a very remarkable case of the disease.

Dr. E. C. WILLIAMS showed three patients: (1) A case which had been exhibited before the Society[1] thirteen months ago, treated by hot air. After twenty-five baths the boy was able to walk; and now, after the lapse of thirteen months, he is able to walk without difficulty and has no limp. (2) A woman who had rheumatoid arthritis for twenty years. She was unable to dress herself or use her needle. She also had a rash, like psoriasis. She has had forty baths, and the joints are now quite well and the rash has also disappeared. She has had no joint-trouble for the last three months. (3) A child who had had patches of baldness for six months before she came to the Children's Hospital. She was treated with blisters, and also with thyroid extract, without any improvement. For the last five months she has been treated with the oxygen cap, and the hair has grown rapidly. The cure may have been a coincidence.—Dr. B. M. H. ROGERS said that the first case was under his care for some time. The improvement was very considerable.—Dr. J. SWAIN did not think that the boy's stiff knee could be called rheumatoid or tubercular. It was most likely traumatic.—Mr. PAUL BUSH was inclined to think that this case might be looked upon as a cure of a stiff knee by movement.—Referring to Dr. Williams's case of alopecia areata, the PRESIDENT advocated the use of pilocarpine internally in this affection, $\frac{1}{15}$th gr. three times a day, together with the local application of the same alkaloid and the weekly shaving of the affected spots. He had seen excellent results from this treatment.—Dr. E. J. CAVE considered it difficult to form an opinion as to the efficacy of treatment in case of alopecia areata, as so many of the cases get quite well under the most various treatment or none at all. He had seen some cases lately which have got well under the local application of formalin.—Dr. C. ELLIOTT could not agree with Dr. Cave that alopecia areata got well without any treatment, although he believed that cases got well under very varied treatment.—Dr. WALDO had found cases of alopecia areata do well with the oxygen cap, but they seem to do equally well with the cap without the oxygen. Saboraud has shown that the disease is caused by a specific bacillus which corresponds to that of the seborrhœa micro-organism.—Dr. E. C. WILLIAMS did not think the knee was tubercular, nor was he prepared to say it was rheumatoid; there was an indefinite history of rheumatism and a history of an injury.

Mr. C. A. MORTON showed a specimen of a large malignant tumour of the kidney, removed by abdominal nephrectomy from a child eighteen months old. It was one of those complex malignant growths

[1] *Bristol M.-Chir. J.*, 1897, xv. 363.

of the kidney which occur in young children—a mixture of sarcoma and new gland-tissue. The upper part of the kidney was not invaded by the growth, but the lower part had been replaced by it. The tumour occupied half the child's abdomen, and projected considerably. In July last, the child was taken to Dr. Cotton for a discharge of blood which was found running down the thighs, but the source of the bleeding was not clear at first. It then became evident that occasional hæmaturia was present, and the abdominal swelling was discovered. Mr. Morton saw the child with Dr. Cotton on August 4th, and operated on the 18th. In the removal of the growth, the posterior layer of the meso-colon was divided, and then the colon drawn forwards. The ureter was divided between double ligatures, but the vessels of the kidney were too much on the stretch to be safely tied, and had to be clamped before division and ligated after. A separate incision was made for drainage in the loin. The amount of shock was moderate, and soon passed off. There were no symptoms after the operation, and primary union took place. At the end of November Dr. Cotton reported that the child's health was not good, but there were no signs of recurrence. Mr. Morton thought that those members of the Society who had perhaps noticed his remarks in the June number of the *Bristol Medico-Chirurgical Journal* might be surprised that he had performed the operation: he had not recommended it, but had placed before the parents the great risk of operation, and the great chance of recurrence; and they had decided to take the risk for the chance of prolongation of life or the very remote one of cure,—and they had been fortunate in doing so, for at any rate the child's life would be prolonged by several months even if recurrence took place at an early date.—Mr. ROGER WILLIAMS said that hitherto results of such operations had been most unfavourable. Several years ago Newman's statistics[1] showed that three-fourths of those operated on died from the effects of the operation, and of the remaining one-fourth all were dead within a year. A later series showed mortality from the operation of two-thirds, and the after-results were no better than in the foregoing series. Recently, Walker's cases[2] showed mortality from the operation of rather less than one-half, and of the remainder several had survived free from recurrence for upwards of three years. It would require considerable research to unearth, out of the several hundred operated cases on record, a score of "cures" who had survived the operation upwards of three years. This mortality was due to great malignancy of these infantile sarcomata, which exceeded that of corresponding disease in adults; frequency with which disease is bilateral (50 per cent.), and multiple *ab initio*. Mr. Williams thought that some of these tumours were more malignant than others, the striped-muscle-containing tumours being more malignant than the adeno-sarcomata; and he remarked on the peculiarity that these two types of sarcoma seldom co-existed, which suggests probable difference of origin. He thought that the best results hitherto attained had been in dealing with the adeno-sarcomata. Renal sarcoma being the commonest form of infantile malignant disease, these cases were of much interest, especially to surgeons.—Mr. T. CARWARDINE suggested the possible origin of the tumour from remains of the Wolffian body, which have been found in the fœtus at the lower and anterior part of the kidney—identical with the situation of this tumour, which appeared rather to invade the kidney secondarily.—In reply to Mr. Roger Williams, Mr. MORTON said the work of Kelynack on *Renal Growths*, and the very important paper by Walker, of the Johns Hopkins

[1] *Diseases of the Kidneys*, 1888. [2] *Ann. Surg.*, 1897, xxvi. 529.

Hospital, of which he had given an abstract in the June number of this *Journal*, gave the most recent information as to the mortality after operation. The one encouraging fact was that it was diminishing. He could not agree with Mr. Williams that there were even a score of cases which had lived for three years after nephrectomy and therefore would be called "cures" according to Volkmann's law. There were two such cases operated on by one surgeon — Abbe, of New York, and two more by German surgeons, and he believed those were all the cases recorded as alive three years after operation. With regard to the bilateral nature of the disease, he called attention to the fact that in the 145 records of cases collected by Walker, the bilateral character of the growth was not marked, though the general view was that it was usually bilateral. Mr. Morton could not agree with Mr. Carwardine that the tumour had arisen outside the kidney. He thought that the fact that the whole organ had not been destroyed by the growth was no reason for rejecting the view that it was essentially a renal growth. A large part of the kidney had been replaced by the tumour. These renal growths of early life had by several pathologists been regarded as arising in remains of the Wolffian body, and the gland tissue when present was thought to resemble more that of the Wolffian body than the kidney.

Dr. JAMES SWAIN showed a specimen of double pyo-salpinx removed from a married but nulliparous woman, who had had severe pelvic pain for two years. The specimen was a good example of large pyo-salpinx, which formed a distinct abdominal tumour—a circumstance which is more infrequent than usual. The operation presented no special difficulty beyond the adhesions which usually exist in these cases, and the patient made an uninterrupted recovery. The pus in such cases is frequently sterile, and that was so in the present case.

Dr. J. O. SYMES showed microscopic specimen and lantern slide of tetanus bacilli in pus. The film was prepared from a suppurating wound of the hand in a patient under the care of Mr. Harsant, at the Bristol Royal Infirmary. Death resulted from tetanus, and cultures of the bacillus were obtained from the wound after death. The number and size of the bacilli were unusually large. Many pyogenic organisms were also present.

Dr. MICHELL CLARKE showed stained blood-films, and lantern slides which showed the various stages of the malaria parasite—tertian variety.

Mr. G. MUNRO SMITH exhibited a series of photo-micrographic lantern slides, prepared by Mr. J. Taylor, illustrating the pathology of rodent ulcer, adenoma of the skin, tubercular ulcer of the tongue, myeloid sarcoma and rickets.—Mr. C. A. MORTON had examined many sections of rodent ulcers, and thoroughly agreed with Mr. Munro Smith that there was not a downgrowth of surface epithelioma, and that they were histologically as well as clinically well differentiated from epithelioma. He objected to the term malignant adenoma which Mr. Smith suggested for rodent ulcer, the type of malignant adenoma of the form of cancer which occurs in the intestine; but here there was a reproduction of gland tissue, whereas in rodent ulcer we found only irregular masses of epithelial cells, and not gland tissue at all. He could not accept Mr. Munro Smith's view that the malignancy of epithelioma consisted in the small round-celled proliferation. He thought the essential condition of malignancy in epithelioma was the invasion of the deeper tissues by the advancing columns of epithelial cells, and he regarded the small round-celled growth as inflammatory, and due to the irritation of the epithelial invasion. He was glad Mr. Smith had shown the slide of tissue removed from the edge of an ulcer

of the tongue for purposes of diagnosis, for he had again and again proved the great value of this method in the diagnosis of ulcers on the tongue of doubtful nature. It was much better than taking a mere scraping or than wasting time in giving iodide of potassium. Only cocaine was necessary as an anæsthetic.—Mr. ROGER WILLIAMS thought it could not be maintained that rodent ulcer was exclusively of sebaceous gland origin. It was quite true that hypertrophied sebaceous structures were often concomitant with rodent ulcer; but these were seldom cancerous. The examination of a large number of specimens had convinced him that the disease occasionally arose from the appendicular structures—hair follicles, sweat glands, and sebaceous glands; but he believed that most cases arose from the interpapillary processes of the *rete*, independently of the glands, etc. From the histogenetic standpoint these were different types of rodent ulcer. That the appendicular structures were not essential to the origin of the disease was, he thought, proved by the fact that rodent ulcer sometimes arose from the dermo-papillary membrane lining the *portio vaginalis uteri*, which was skin, without any appendicular structures (sebaceous glands, sweat glands, hair follicles, etc.). He had met with a case of this kind, in which the disease evidently started in the *rete;* and this he believed was its usual origin.—Dr. F. H. EDGEWORTH remarked that the generalisation drawn by Mr. Munro Smith from his section of rickets was probably too wide, as at the last meeting of the Bath and Bristol Branch of the British Medical Association Mr. Flemming had shown sections of rickets in which these appearances were not present.[1]—Dr. MICHELL CLARKE said that he had seen as irregularly-shaped cartilage-cells as those shown on the screen in the specimen of rickets in the normal development of cartilage into bone.

January 11th, 1899.

Dr. R. ROXBURGH, President, in the Chair.

Mr. C. E. S. FLEMMING showed microscopical sections of an angeiosarcoma from a woman aged 68, who two years before her death fell and hurt her back. A week after the accident she had pain in her sacrum; this continued for nine months before any direct evidence of a growth could be discovered. There was then a pulsating tumour over the right sacro-iliac synchondrosis, with a loud bruit heard down to the femoral artery. The tumour increased steadily in size, latterly causing paralysis of the bladder and pain in the right leg. There was no clinical evidence of any secondary growth. By a partial *post-mortem* examination nearly the whole of the sacrum and a considerable part of the right ilium were found to be destroyed by a large soft mass in appearance like organising bloodclot. Under the microscope this growth was found to consist almost entirely of embryonic blood-vessels, with intervening small collections of nucleated round cells and a few laryngo-myeloid cells. The cells of the blood-vessels were in places markedly columnar, and between the different vessels there could be distinguished in places a fine fibrillar matrix. It appeared probable that the growth might have originated in the cauda equina.—Mr. ROGER WILLIAMS said that though this form of neoplasm was rare, it had now been demonstrated in most parts of the body. If we accept the view that it arose from the peri-epithelium or endothelium of the blood-vessels and lymphatics there was still some difficulty in deciding whether it should be classed with the sarcomata or with carcinomata, because embryologists were at variance as to whether endothelial structures were of archiblastic or of parablastic origin. In their clinical character growths of this kind

[1] *Vide* p. 21 of present number.

generally resembled carcinomata, especially in that they were very prone to disseminate, and he enquired if there were any signs of malignancy in this case. He thought growths of this kind were interesting in connection with Ackermann's hypothesis of sarcomatosis, according to which all sarcomata arose in the immediate vicinity of blood-vessels or lymphatics, every tumour consisting of interwoven neoplastic fasciculi with a central blood-vessel.

Dr. WALDO read a paper on hemorrhoids, which, he said, were always pathological. By far the greater portion of the blood from the plexus of hemorrhoidal veins is carried into the inferior mesenteric vein, and thence into the vena portæ, through the medium of the superior hemorrhoidal vein. The circulation through the portal system is subject to much interference in consequence of hepatic and intestinal obstruction, and in these changes the blood in the hemorrhoidal plexus also participates; and were it not for the provision that exists by which this plexus may free itself to a certain extent from over-distension by its communication with the internal iliac vein, through the medium of the middle hemorrhoidal vein, piles would be much more frequent than they even now are, as a consequence of obstructed portal circulation. All these veins are valveless, and are therefore liable to over-distension whenever the abdominal circulation is sluggish. An invariable accompaniment of internal piles is a greater or less degree of prolapse of the mucous membrane of the rectum, and chiefly on this account the patient should be instructed to have his daily motion at bedtime. The chief reflex phenomena encountered are a dull aching fixed pain at the lower part of the lumbar spine, which may extend down the thighs or round the groins, and irritation in the neighbouring organs. Patients should adopt a rational way of living. The diet should be so regulated as to leave behind the least possible solid residue. Highly seasoned food, or vegetables containing much cellulose and the leguminous vegetables, should be avoided. Meat or fish, rather than much starchy food, is advised. And green vegetables with stewed fruits and preserves, with a fair quantity of diluents, assist the daily action of the bowels. Fat of meat, or cream or butter, may be taken, as oleaginous substances are found to assist the flow of the bile and so indirectly the vascular circulation. Moderate exercise should be taken in various ways. The tendency to bleed after fifty years of age gradually grows less and finally disappears. The tumours may remain, and with them the old tendency to prolapse; but generally they atrophy, leaving little if any future discomfort unless the prolapse is bulky. Treatment by drugs was touched upon, and a mechanical mode of treatment upon physiological principles was explained and advocated. He believed that physicians could assist these patients immensely; but in some cases, whether medical treatment is neglected or not, the only right proceeding is to hand them over to the operating surgeon. A young clergyman from South Africa, who consulted Dr. Waldo a few months ago, told him that two-thirds of the clergy and doctors in that part of the world were operated upon for piles (some of them two or three times), the cause of this being that they averaged fifty miles a day in the saddle.—Mr. MUNRO SMITH suggested that the liver had not so much to do with hemorrhoids as was usually thought. He doubted if obstruction in the portal circulation occurred apart from definite disease of the organ, and if it occurred whether it could be diagnosed.—Dr. AUST LAWRENCE referred to the necessity in all cases of ascertaining by a digital examination that piles really did exist; he mentioned several cases that he had seen treated for piles where the disease was of a malignant character, and often in women all the symptoms were due to uterine displacement.—Mr. C. E. S. FLEMMING

objected to the use of glycerine injections, because of their liability to cause painful and troublesome tenesmus and occasionally hemorrhage. He also wished to know in which class of cases anal gymnastics should be adopted, as stretching of the sphincter had been frequently recommended as a method of treatment.—Mr. EWENS had seen many cases of *supposed* piles, which proved to be due either to retroflexed or retroverted uterus, or to an enormous accumulation of fæces in the rectum. Appropriate treatment relieved these cases. He had met with cases of supposed piles which were really malignant disease of the rectum. He had seen much benefit from the administration of hazeline in bleeding piles in connection with mild aperients.—Dr. HARRISON suggested that hazeline has been long known as efficacious in the treatment of hemorrhoids, invariably as a well-known American popular remedy—Pond's Extract—containing hazeline. Dr. Harrison was surprised to hear that riding on horseback tended to produce piles: of course much exercise would not be advisable where piles were actively asserting themselves, but as a preventative to liver congestion and hemorrhoids the late Lord Palmerston's dictum was a very wise one; viz., "that the outside of a horse was the best thing for the inside of a man." Dr. Harrison also controverted Dr. Waldo's suggestion that pruritus ani was common with piles, Dr. Harrison associating it much more with eczema and fissure of the anus.—Dr. WATSON WILLIAMS considered that while in the less pronounced cases of hemorrhoids medical treatment might be attended with very favourable results, it was well to bear in mind the limitations of medical methods, and in suitable cases to call in the aid of a surgical colleague. He did not think that the advantages of a radical surgical cure were sufficiently often impressed on patients, whose lives were not seldom marred by a condition that could be, and should be, completely removed. —Mr. CARWARDINE pointed out that piles have recently been shown by dissection to be really cavernous angeiomata, fed by the superior hemorrhoidal artery, and consequently not of venous origin,—Dr. ELLIOTT considered heredity an important factor in the causation of piles. He believed bicycling and riding on horseback were of decided benefit to this class of patients. With regard to operation, he begged to remind members that the patient as well as the surgeon had to have a voice in the matter; and when the former heard of death following an operation among his friends, he was not surprised that patients welcomed other modes of treatment. Personally he was acquainted with two fatal cases due to secondary hemorrhage following operation; and knew of a third case, where a fatal result was fortunately prevented by plugging the rectum. Such cases, of course, did not appear in our medical journals.—In reply, Dr. WALDO said, as a large portion of the blood is obliged to return to the heart through the liver, hemorrhoids would certainly be influenced by any obstruction occurring in the latter organ.

Dr. AUST LAWRENCE read a paper in which he urged (1) the necessity of repairing all perineal injuries after labour; (2) the use of catgut with which to repair these injuries, and the non-inclusion of the skin in the operation; (3) the importance of keeping on the forceps until the head is delivered, as this often prevents and ought never to cause rupture of the perineum; (4) the wisdom of telling the husband, etc., that with the use of forceps there may be laceration of the perineum; but it is not caused by the forceps, but by the large size of the child's head and by the small parts of the mother.—Dr. FIRTH mentioned a case in which he had been asked to repair a perineum seven days after confinement.

He had succeeded in persuading the patient to have the operation postponed for at least six weeks. Dr. Firth asked Dr. Lawrence if he would consent to operate seven days after confinement, and if not, how long he would wait.—Dr. NEWNHAM said that it is perhaps well, in putting sutures into the perineum immediately after the confinement, to be careful not to sew up the rectum entirely. A case sent to him lately had the perineum and rectum so completely sewn up that ntestinal obstruction was caused; and, finally, an anus was formed in the posterior wall of the vagina. It is, therefore, important to see that a direct outlet is left for the fæces after sewing up a bad rupture of the perineum.—Dr. WALTER SWAYNE said that a most important point with regard to the immediate union of lacerations of the genital tract was the prevention of septic poisoning. In his experience of puerperal septicæmia the most hopeless and intractable cases were those in which lacerations of the vagina and perineum were present. The raw lacerated surface allows of direct infection of the lymphatic system by septic micro-organisms, and the production of a most acute form of septicæmia. Then again minor forms of septic infection, in which the general symptoms were more urgent, led to the production of sub-involution of the uterine body and ligaments, and in this way predisposed to displacements such as procidentia. On these grounds alone the immediate union of all lacerations should be the invariable practice. He would not criticise Dr. Lawrence's paper, as his remarks should meet with universal acceptance.

Dr. J. LACY FIRTH read a paper on a case of primary sarcoma of the thyroid gland, in which a marked amelioration of symptoms for four months had resulted from partial thyroidectomy, the right lobe having been removed. The rarity of this form of growth was alluded to, and the almost uniformly rapid fatal result of operations upon them.—Mr. HARSANT referred to a case of primary carcinoma of the thyroid body, upon which he had operated for the relief of dyspnœa; the patient only survived a short period. He had never met with a case of sarcoma of the thyroid.—Mr. ROGER WILLIAMS said he had made an analysis of all the primary tumours under treatment at four large Metropolitan hospitals during a period of from ten to fifteen years. Of 7,294 cancers only seven originated in the thyroid, and of 1,266 sarcomas only one started in the thyroid. He knew of several instances of malignant thyroid neoplasms arising in early life. Zahn had reported an instance in a fœtus. In several cases chondromatous, rhabdomyomatous and squamous epithelial structures had been found in these tumours; and he asked if heterotopic elements of this kind had been noted in Dr. Firth's specimen.—Dr. STACK asked whether there was any diminution in the portion of the gland left, as it is said that sometimes malignant disease of the thyroid for a time diminishes after partial operations.—Dr. WALDO asked whether Mr. Firth had administered thyroid extract to patients with non-malignant enlargement of the thyroid gland, considering that the current view was that the system called upon the thyroid body for an increased supply of its excretion, and that the gland responded and as a consequence hypertrophied. It is said that if the extract is given by the mouth in some of these cases the thyroid body diminishes in size, and the patient recovers.—Mr. MORTON could not quite agree with Mr. Harsant that removal of a portion of the gland was the only method of dealing with urgent dyspnœa in these cases. He thought an opening into the trachea above the isthmus, and the passage of a large tube such as a wide gum-elastic catheter below the obstruction, might be done in desperate cases.—Mr. PAUL BUSH remarked that in two of his cases of malignant

disease of the thyroid gland, in which a partial removal only could be performed, there had been a considerable diminution in the size of the growth following operation, lasting in one case for several months: the growth in this case was undoubtedly a sarcoma; both patients, however, died of the disease eventually.—In reply, Dr. J. LACY FIRTH remarked that microscopical examination showed his case to be one of pure sarcoma of the thyroid. Here and there in the section remains of the thyroid vesicles undergoing destruction were to be seen. In the published drawings of secondary thyroid tumours found in bone and other tissues, there was no appearance of sarcomatous tissue, and they were, therefore, neither sarcomata nor adeno-sarcomata. In his case there had been a very noticeable diminution of the left lobe of the gland for a time after the operation of thyroidectomy on the right side. He had tried the effect of thyroid extract in two cases of enlarged thyroid. The first case was one of sporadic cretinism, and the thyroid gland was the largest he had seen and of the adenomatous type. The extract rapidly produced a marvellous diminution in the size of the gland and amelioration of the symptoms. In the second case, one of ordinary goitre, the effect of the medicine had been favourable, but not to a marked degree.

February 8th, 1899.

Dr. R. ROXBURGH, President, in the chair.

Dr. F. H. EDGEWORTH showed a specimen of abscess of the brain. The patient, a woman aged 43, who had never had any previous illness, was on December 2nd seized with motor aphasia, and paralysis of the right side of the face and tongue and of the right arm, without loss of consciousness. Ten days later the right leg became paralysed and the intelligence blunted, and a week subsequently she died with symptoms of pressure on the left cerebral hemisphere. No lesion or abnormality of the vascular system was detected, and the urine was normal. The *post-mortem* examination showed an old abscess of the left nucleus lenticularis, which had recently invaded the left internal capsule. The rest of the body was intact. The abscess, from its situation, must have been embolic in origin, but no source of septic embolism was discovered. Gross organic lesions of the brain, such as tumour and abscess, may in some instances give rise to suddenly developing symptoms; but there is usually some evidence, such as headache, vomiting, or optic neuritis, which suggests that the lesion is other than a vascular one. Such evidence was wanting in this case.

Dr. SYMES read a paper on "The Bacteriology of some Suppurations complicating Pulmonary Disease." This and the discussion which followed will be found on pp. 30—35.

Dr. MICHELL CLARKE read a paper embodying observations on the temperature in cases of apoplexy, and on the occasional occurrence of painful œdema, and of loss of the knee-jerk in the paralysed limbs in hemiplegia. This will be printed in full in a future number.

Mr. T. CARWARDINE showed microscopic slides illustrating some points in the pathology of Paget's disease of the nipple, from preparations made by Mr. A. L. Flemming. Enlarged axillary glands were present, and they exhibited secondary deposits of epithelium similar to that in the diseased nipple, although there was no tumour in the true breast tissue. Another specimen showed the epithelial change passing down a galactophorous duct (*a*) as a cellular process passing down the lumen, (*b*) as a proliferation of and change in the cells of the Malpighian layer around the deep part of the duct.—Mr. ROGER WILLIAMS said the

history of the evolution of our knowledge of Paget's disease showed at every turn the ill effects entailed by the unscientific use of personal names for the designation of morbid conditions. The result had been such mystification and confusion, that it was necessary before discussing the subject to state precisely what was meant by Paget's disease; for this term had been applied to so many totally different morbid conditions, that it was now seldom used by two persons in the same sense. Paget,[1] who first prominently directed attention to the subject, defined the condition as "disease of the mammary areola preceding cancer of the mammary gland"—an admirable definition which, had it been preserved, would have prevented a flood of misunderstanding and bad practice. It had been repeatedly demonstrated that the areolar disease referred to was nothing but eczema; and the cancer—which developed in the substance of the gland, without there being any obvious connection between the two diseases—was of the acinous *(scirrhus)* variety. Paget admitted that the areolar disease might often be cured, without any ill consequences ensuing; but he thought it was "very often" followed by the development of cancer in the breast. In support of this opinion he adduced no statistical data; for none were then available. Recently the subject had been investigated on a large scale: and it had been shown that the outbreak of mammary cancer had been preceded by eczema of the areola, only in about ½ per cent. of the total cases. We might, therefore, disabuse our minds of the idea that "Paget's disease" played any important part in the pathogeny of mammary cancer. Eczematous affections of the areola were very seldom followed by the development of mammary cancer: hence the breast should never be extirpated for such conditions, unless there were signs of concomitant malignant disease. Thin had described as "Paget's disease" cases of cancer of the mammary ducts (tubular cancer) with secondary inflammation of the nipple and areola by irritant discharges. Another class of cases that had been described as "Paget's disease" were the so-called "eczema cancers": cases in which epithelioma had supervened on eczematous affections of the nipple and areola. Mr. Williams thought the specimen exhibited this evening was an instance of this kind—squamous epithelioma, with dissemination in the axillary glands.

Mr. HARSANT read some notes of a case of actinomycosis occurring in a gentleman living at Taunton, under the care of Dr. Husbands. Six months ago he had put an ear of barley-straw in his mouth. It pricked the mucous membrane under the tongue, causing a painful swelling there which disappeared after a few days. Two or three weeks afterwards a swelling appeared on the front of the neck, over the thyro-hyoid membrane; this had gradually increased until it was as large as a walnut. It presented a semi-fluctuating swelling, the skin over which was red and œdematous. It was diagnosed as being probably actinomycosis, and was freely excised. The wound healed readily and there had been no recurrence. The tumour contained numerous yellow granules, which under the microscope showed the characteristic ray-fungus. Microscopical specimens were shown by Dr. Symes; and a photo-micrograph, prepared by Mr. James Taylor, was thrown on the screen.—Dr. WALDO asked Mr. Harsant if the glands in the neighbourhood of the growth were affected in his case. He considered this a very important point, as the fungus was too large to pass along the lymphatics, and unless pyogenic microbes gained an entrance and set up suppuration the glands remained healthy. The disease spread through the blood-vessels. He remarked that it was

[1] *St. Barth. Hosp. Rep.*, 1874, x. 87.

singular that the bone was nearly always affected when actinomycosis attacked the lower animals, whereas in man it was quite the exception. On the other hand, suppuration was the rule in man and never occurred in animals. He said there were some well authenticated cases in which the internal administration of iodides seemed to cure the patient, and also when an iodide solution was injected into the tissues. Electro-chemical treatment was also well spoken of, the solution being injected and then a current passed through to decompose the substance, and so utilise the antiseptic power of iodine in its nascent state.

Prof. FAWCETT showed through the lantern some sections of the cord, medulla, and midbrain, stained by a modification of the Weigert-Pal method.

J. PAUL BUSH, *Hon. Sec.*

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in December:

February 28th, 1899.

Clinical Society of London (1) ... ... 1 volume.
Laryngological Society of London (2) ... ... 1 ,,
B. M. H. Rogers, M.D. ... ... 3 volumes.
Royal Academy of Medicine in Ireland ... ... 1 volume.
Surgeon-General, United States Army (3) ... ... 14 volumes.
James Swain, M.D. ... ... 1 volume.
Caleb Trapnell (4) ... ... 1 ,,

Unbound periodicals have been received from Dr. B. M. H. Rogers, Dr. R. Shingleton Smith, the Surgeon-General, United States Army, and Dr. B. W. Walker. Dr. Shaw has presented a framed picture; and unframed pictures have been received from the Surgeon-General, United States Army, and Dr. De Forest Willard.

THIRTY-FIRST LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Aarons, S. J. ... *Golden Rules of Gynæcology* ... ...[1898]
Bannatyne, G. A. *The Thermal Waters of Bath* 1899
Beasley, H. ... ... *The Pharmaceutical Formulary.* 12th Ed. (Ed. by J. O. Braithwaite) 1899

Bell, J..... ... ... *Notes on Surgery for Nurses*.... ... ... 5th Ed. 1899
Burdon-Sanderson, J. *Ludwig and Modern Physiology* 1898
Catalogue (Index) of the Library of the Surgeon-General's Office, United States Army. 2nd Ser., Vol. III. ... ... (3) 1898
Children, An American Text-Book of the Diseases of. (Ed. by L. Starr and T. S. Westcott.) 2nd Ed. 2 parts 1898
Copeman, S. M. ... *Vaccination: its Natural History and Pathology*... ... 1899
Dowse, T. S. ... *The Treatment of Disease by Physical Methods* 1898
Engelmann, G. J. *Accouchements chez les Peuples primitifs.* (Étude français par P. Rodet) ... ... (4) 1886
Fenwick, E. H. ... *Golden Rules of Surgical Practice*.... ... ... 5th Ed. [1898]
Foster, M. ... ... *Recent Advances in Science* 1898
Fothergill, W. E. *Golden Rules of Obstetric Practice* ... ... [1898]
Gage, S. H. ... ... *The Processes of Life revealed by the Microscope* 1898
Glycerine, The Properties and Uses of Pure ... ... [1898]
Gowers, Sir W. R. *Diseases of the Nervous System.* 3rd Ed. (Ed. by Sir W. R. Gowers and J. Taylor.) Vol. I. ... 1899
Grünwald, L. ... *Atlas and Abstract of the Diseases of the Larynx.* (Translated. Ed. by C. P. Grayson) 1898
Guy de Chauliac... *La Grande Chirurgie, 1363.* (Revue par E. Nicaise) 1890
Gynecology, An American Text-Book of. (Ed. by J. M. Baldy.) 2nd Ed. 1898
Haviland, A. ... *The Geographical Distribution of Disease in Great Britain*.... ... ... 2nd Ed. 1892
Haydn, J. ... ... *The Book of Dignities.* 3rd Ed. (Ed. by H. Ockerby.) 1894
Hewlett, R. T. ... *A Manual of Bacteriology* 1898
Hillemand, C. ... *Organothérapie ou Opothérapie* 1899
Hofmann, E. von *Atlas of Legal Medicine.* (Translated. Ed. by F. Peterson and A. O. J. Kelly) 1898
Keen, W. W. ... *The Surgical Complications and Sequels of Typhoid Fever* 1898
Kingscote, E. ... *On So-called Spasmodic Asthma* 1899
Lexicon of Medicine and the Allied Sciences. (New Syd. Soc.) Part XXIV. 1898
Liaras, E. J. Moure et G. *Traitement chirurgical de quelques Paralysies faciales d'Origine otique* 1899
Longmore, Sir T. *Richard Wiseman* 1891
Macilwain, G. ... *Memoirs of John Abernethy.* 2 vols. 1853
M'Keown, W. A.... "*Unripe*" *Cataract* 1898
Méric, H. de ... *Dictionary of Medical Terms—English-French* 1899
Mondeville, H. de *Chirurgie, 1306 à 1320.* (Traduction française, avec des notes, par E. Nicaise) 1893
Moure et G. Liaras, E. J. *Traitement chirurgical de quelques Paralysies faciales d'Origine otique* 1899
Mracek, F. ... ... *Atlas of Syphilis and the Venereal Diseases.* (Translated. Ed. by L. B. Bangs) 1898
Myxœdema, Report of a Committee of the Clinical Society of London on... (1) 1888
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Local Medical Notes.

BRISTOL.

HOSPITAL SUNDAY.—The second annual collection in places of worship on behalf of the Medical Charities of this City has been more productive than the first. This is partly due to better organisation, and partly to the fact that the recipients of the notes given for the collections found that they got more for their money by contributing through this Fund. The principle on which the distribution of notes was made was so arranged that the donors of small amounts received more in proportion than those who sent large ones, on the theory that the smaller subscriptions came from the poorer congregations. With very few exceptions the plan seems to have given satisfaction. It is hoped that next year, by arrangement with the Institutions, more notes will be at the disposal of the Committee. We cannot help expressing the great loss the Committee has experienced by the appointment of the Rev. Canon Cornish to the see of Grahamstown. It was largely due to his indefatigable exertions that the Hospital Sunday Fund was put upon its present sound basis, and the Committee will find it difficult to fill his place with a man of equal calibre, organising power, or enthusiasm.

THE CONVALESCENT HOME.—This will soon, we hope, be opened for the reception of inmates. All the legal formalities have been concluded, and the necessary alterations are being pushed forward. No date has as yet been mentioned for the opening, but we believe that when the doors are opened the building will be found to be replete with every convenience.

THE PREVENTION OF CONSUMPTION.—A movement has been started to form a local committee or branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis. Several meetings have been held to discuss the matter, and a provisional committee of medical men has been formed, of which Dr. E. L. Fox is the chairman; Dr. D. S. Davies, vice-chairman; Dr. Michell Clarke, honorary secretary; and Dr. P. Watson Williams, honorary treasurer. It is to be hoped that the citizens of Bristol will give their cordial assistance in this important matter, and that some practical results will follow.

UNIVERSITY COLLEGE.—Dr. G. Parker has been appointed Joint Lecturer on Medical Jurisprudence in place of Dr. A. J. Harrison, resigned.

EYE DISPENSARY.—Dr. Alex. Ogilvy has been appointed Surgeon to the Eye Dispensary in the place of Mr. Cyril H. Walker, resigned.

FEVER HOSPITALS.—Dr. D. S. Davies has been appointed Medical Superintendent of the City of Bristol Fever Hospitals at Ham Green and Novers Hill.

Congress of Gynæcology and Obstetrics.

The Third Session of the International Congress of Gynæcology and Obstetrics will be held at Amsterdam, from the 8th to the 12th of August, 1899. The questions arranged for discussion are as follows:—1. The surgical treatment of fibro-myoma. 2. The relative value of antisepsis and improved technic for the actual results in Gynæcological Surgery. 3. The influence of posture on the form and dimensions of the pelvis. 4. The indication for Cæsarean section compared to that for symphysiotomy, craniotomy, and premature induction of labour.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

The Misericordia.—The Roman correspondent of the *Lancet*, writing in the issue of February 25th, says:—"When the 'Romance of Outdoor Relief' comes to be written it will owe some of its most touching, most picturesque, chapters to the Misericordia—a brotherhood peculiar to Tuscany, seen at its best in Florence, though also admirably *en évidence* at Siena, Pisa, Leghorn, and Lucca, and not unworthily represented in the minor provincial towns, inland or maritime. Ecclesiastical in origin, it was founded in 1244 by Pietro di Luca Borsi and its *personnel* is drawn from every social rank, all and individually bound to serve whenever summoned, without fee or reward. The Grand Duke himself, when presiding at a State banquet in the Pitti Palace, has had to rise and leave his guests when his turn came and to bear a hand with tradesmen, nobles, mechanics, professional men—with the company, in fact, promiscuously improvised to transport to hospital some victim of an accident or to carry a patient from the sick bed to the suburban lodging indicated by the physician. The service is not one of 'unskilled labour.' The members of the brotherhood have all been previously trained to lift the sufferer from the street, to turn the patient in bed, and put him on the 'bara' or stretcher with the minimum of pain or of risk to compromised limbs or organs, and thereafter to bear him through the thoroughfares to his destination with the least possible vibration, friction, or disturbance. As often happens, the particular company told off on sudden duty is composed of men as various in altitude as they are in social position, so that in carrying the 'bara' shoulder high they employ for the first part of the journey those of them who are as nearly as possible of the same height, and when these are tired they lower their burden to the less tall without interruption of movement or alteration of pace and so continue the shifting process till the sufferer is at his journey's end and laid down in bed with scarcely the consciousness of having been transported at all. Few sights or sounds are more impressive in the Florence of to-day than the 'measured march' of the Misericordia through its crowded streets, as robed in black gowns and hooded in black cowls with

(P.A. N° 11776 - I FRATELLI DELLA VEN. ARCICONFRATERNITA DELLA MISERICORDIA DI FIRENZE.

MENTRE TRASPORTANO UN FERITO ALL' OSPEDALE

openings for the eyes the brotherhood wends its way with its burden, the bystander lifting his hat sympathetically, the traffic reverently falling aside, and the street noises subdued to a momentary hush in presence of

'The still, sad music of humanity.'

Queen Victoria, it is well known, took profound interest in the Misericordia during her successive sojourns in Florence, and one of its highest office-bearers, the late Cavaliere Cesare Barsi, was deputed by the Arci-Confraternità to visit the Villa Palmieri, there to set forth to Her Majesty its origin and constitution, the nature of its service, the resources at its command, and the more striking incidents in its experience. As I have said, the brotherhood is peculiar to Tuscany, though other cities have their equivalents, each in its own way rendering similar service; few if any of them, however, being able to point to the same antiquity of origin, to the same large resources, or to the same admirable discipline and organisation. I have been led to give this brief notice of the Misericordia from the funeral obsequies just celebrated in Florence of the Provveditore (or general provider and administrator) of the Brotherhood, Signor Giuseppe Bronzuoli—a singularly imposing and picturesque pageant composed of 300 members of the Arci-Confraternità, 50 'capi di guardia' (chiefs of the guard) and 35 priests. The procession included many citizens among whom were not a few surgeons and physicians, those of them who immediately followed the hearse bearing lighted torches."

Canon Wallace, who kindly lent me the photograph from which the picture on the opposite page has been reproduced, sends me the following information, for the authenticity of which he does not vouch, but which he got from apparently good sources:—

In the 13th century, the porters in the piazza of the Duomo, Florence, were a gambling, swearing set. In 1240, Pietro Borsi, one of their number, set on foot a system of fines for bad language, and suggested that the accumulated money should be used for litters and bearers for the sick.

Under the present system, which has been developed out of Borsi's idea, at the sound of the campanile bell, day or night, the members on the roster for that day repair at once to the hall of meeting. The summoning official turns an hour-glass to mark the interval between their summons and arrival. In assigning their task the Captain says: "Brethren, prepare for a work of mercy," then kneeling prays: "Mitte, Domine, nobis caritatem, humilitatem et fortitudinem." They reply: "Ut in hoc opere Te sequamur." He then bids them say a Paternoster for the sufferer. Four take up the litter. The captain leads and four follow. They relieve each other. As they change one set says, "God reward you;" the other replies, "Go ye in peace." Some of the sick nurses are trained specially to move sufferers and patients in accident cases, and are called "Mutanti." They receive no pay, and are allowed to accept only cold water. In sickness a physician is provided for them. They are of "all sorts and conditions of men," and when the official dress is slipped on over their ordinary clothes the rank or occupation of the brother can only be guessed from his boots.

Clinical Records (26).—The house-surgeon of a London hospital was attending to the injuries of a woman whose arm had been severely bitten. As he was examining the wound, he said: "What sort of animal bit you? This is too small for a horse's bite, and too large for a dog." "Oh, sir," replied the patient, "it wasn't an animal. It was another lydy."

Medical Philology (XXIX.)—The following is to be found in the *Promptorium*: "Deffe, or dulle. *Obtusus, agrestis.*" Mr. Way's note says: "Jamieson observes that deaf signifies properly stupid, and the term is transferred in a more limited sense to the ear. It is also applied to that which has lost its germinating power; thus in the North, as in Devonshire, a rotten nut is called deaf, and barren corn is called deaf corn, an expression literally Ang.-Saxon. An unproductive soil is likewise termed deaf. The plant lamium, or archangel, known by the common name, dead or blind nettle, in the *Promptorium*, has the epithet DEFFE, evidently because it does not possess the stinging property of the true nettle."

Jamieson's statement is not quite accurate. Although the word was used with the general meaning to which he refers, it was also employed in its

ordinary restricted sense from very early times. The *New English Dictionary* gives 9th and 13th century instances; and it will be remembered that the Wife of Bath, described by Chaucer, long before the compilation of the *Promptorium*, was "som-del deef, and that was scathe."

The *Promptorium* in another place gives *surdus* as an equivalent of "deffe."

Readers who may be interested in the forms which are figurative or now dialectal will find several quotations in the *New English Dictionary*.

La Médecine en quatrains.—Quelqu'un pensa, dit-on, à mettre l'histoire de France en madrigaux. Ce n'était pas une tâche plus extraordinaire que de découper la médecine en quatrains, et plus d'un s'y est essayé.

Il y a les *Aphorismes d'Hippocrate*, mis en vers françois, par le sieur de Launay, chirurgien; Paris, 1642. Il y a les *Quatrains anatomiques des os et des muscles du corps humain*, par le sieur Claude Binet; Lyon, 1664.

La chimie elle-même s'est, parfois, ingénieusement et agréablement alliée à la poésie. En doutez-vous? Lisez ceci:

Voulez-vous fair' de l'hydrogène?
Prenez un tub' de porcelaine;
Mettez-y du fer et de l'eau:
Placez le tout sur un fourneau,
En vapeur l'eau décomposée
Est promptement analysée:
L'oxygène s'unit au fer,
Et l'hydrogèn' s'en va dans l'air.

De la musique d'Hervé là-dessus et ce serait charmant!—*La Revue médicale*.

Hebrew Therapeutics.—From a periodical called *The Old Paths*, in which the Rev. Alexander McCaul, D.D., compared "the Principles and Doctrines of Modern Judaism with the Religion of Moses and the Prophets," I extract from the number for July 1st, 1836, the following:—

"Wisdom is a test of true religion, and folly of a false one. Let us then apply this test to the religion of the oral law. Does it commend itself to the understanding by its wisdom, and the wisdom of its teachers? It is true, that it speaks well of itself, and calls all its doctors 'wise men'; but the histories which the Talmud gives of the Rabbinical practice with regard to charms lead to the inevitable conclusion that wisdom is not one of the characteristics of the oral law. Take for example the following: 'For a bleeding at the nose, let a man be brought who is a priest, and whose name is Levi, and let him write the word Levi backwards. If this cannot be done, get a layman, and let him write the following words backwards—"Ana pipi Shila bar sumki," or let him write these words—"Taam dli bemi keseph, taam li bemi paggan." Or let him take a root of grass, and the cord of an old bed, and paper and saffron, and the red part of the inside of a palm-tree, and let him burn them together, and let him take some wool, and twist two threads, and let him dip them in vinegar, and then roll them in the ashes, and put them into his nose. Or let him look out for a small stream of water that flows from east to west, and let him go and stand with one leg on each side of it, and let him take with his right hand some mud from under his left foot, and with his left hand from under his right foot, and let him twist two threads of wool, and dip them in the mud, and put them into his nostrils. Or let him be placed under a spout, and let water be brought and poured upon him, and let them say, 'As this water ceases to flow, so let the blood of M., the son of the woman N., also cease."' (Gittin, fol. 69, col. 1.) Now we ask any Jew of common sense, whether this passage savours most of wisdom or folly? Vinegar and water may be very useful in such a case, or even mud, if used in sufficient quantity, might stop up the nose, and therefore stop the bleeding too, but what manner of benefit can proceed from the word Levi written backwards, or from the words which Rashi pronounced to be magical? Why is the mud of water flowing from east to west more efficacious, and why is it to be taken with the right hand from under the left foot, and with the left hand from under the right foot? Plainly because the authors of this passage thought there was some charm or magic power, and their minds were so overpowered by superstition as to lead them to disregard the plain words of Moses forbidding all magic. It cannot be pretended that this is a rare case, the Talmud abounds in such remedies, all equally wise."